



DEPARTMENT OF CITY PLANNING

110 LARKIN STREET - SAN FRANCISCO, CALIFORNIA 94102

SAN FRANCISCO CITY PLANNING COMMISSION
AND SAN FRANCISCO REDEVELOPMENT AGENCY

DRAFT

ENVIRONMENTAL IMPACT REPORT

YERBA BUENA CENTER

SUPPLEMENT

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AND SAN FRANCISCO REDEVELOPMENT AGENCY****DRAFT****ENVIRONMENTAL IMPACT REPORT****YERBA BUENA CENTER****SUPPLEMENT
EE81.27**

**Written Comments should be sent to the San Francisco
Redevelopment Agency, 939 Ellis Street, San Francisco Ca. 94109**

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Yerba Buena Center draft
environmental impact
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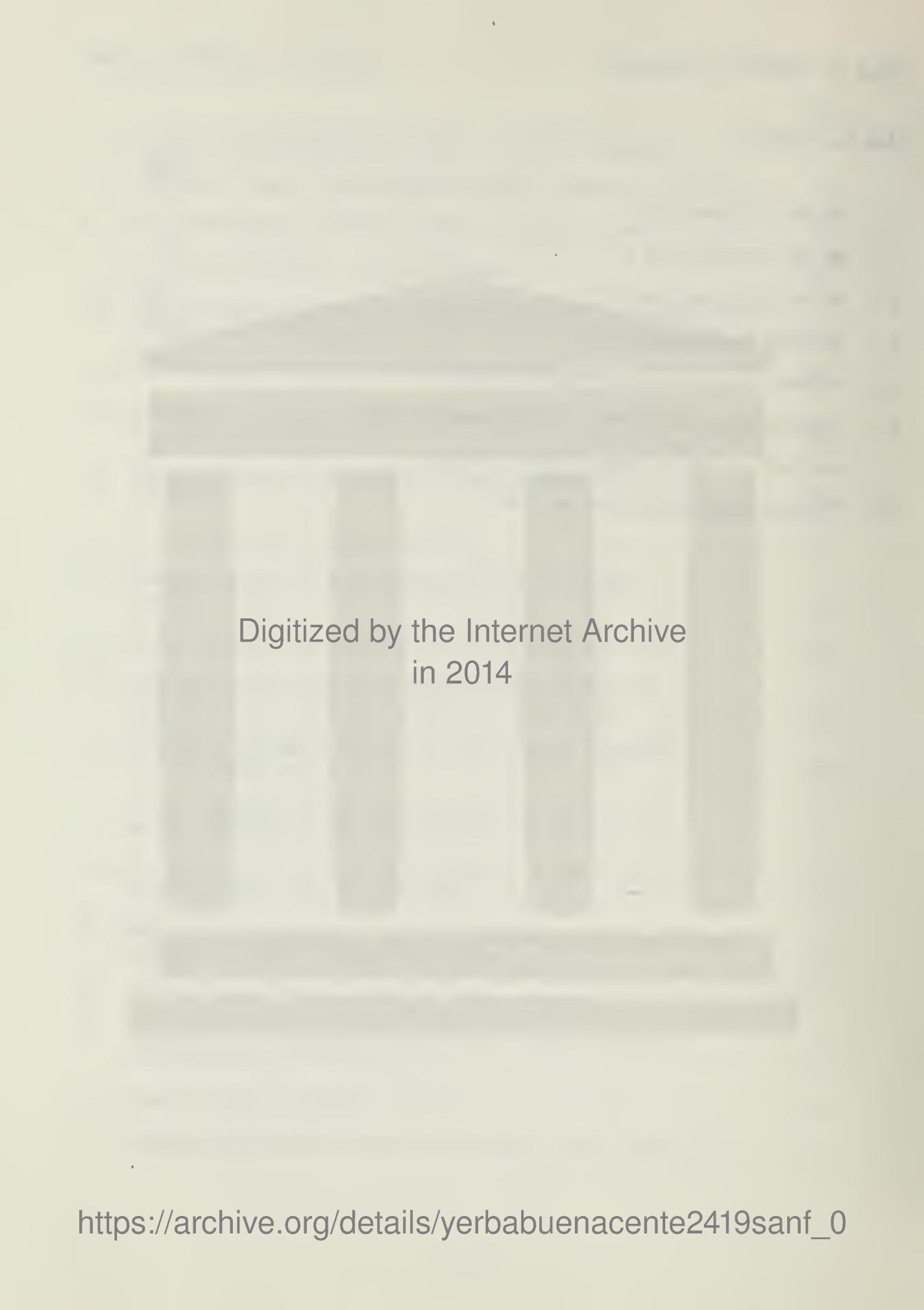
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S. SUMMARY

This document has been prepared as a Supplement to the Yerba Buena Center Final EIR (YBC FEIR) (EE 77.220, State Clearinghouse No. 7801163), which was certified on April 25, 1978. Four alternative development plans and variants on them, and the November 1977 Tentative Proposal were considered for the entire YBC redevelopment area in the 1978 YBC FEIR. Subsequently proposed changes in the land uses on the two blocks designated as Central Block 1 and Southern Block 4 would have new environmental impacts, requiring important revisions to the YBC FEIR, which are contained in this Supplement. In this Supplement, Central Block 1 (CB-1) refers to that portion of Assessor's Block 3706 within the YBC boundaries, plus the 49 Fourth St. General Services Administration (GSA) site. Southern Block 4 (SB-4) is that portion of Assessor's Block 3763 within YBC. Where the impacts of the new proposals would differ from those identified for the respective sites in the YBC FEIR, the differences have been stated. Where the impacts would not differ, the types of information in the YBC FEIR have been summarized and incorporated by reference.

A. CENTRAL BLOCK 1

The new mixed-use proposal for CB-1 would contain: 500,000 gross sq. ft. of office space and approximately 80,000 gross sq. ft. of retail-commercial space (both including renovated Jessie St. Substation); up to 500 market-rate dwelling units; a 700-room Arcon Pacific hotel fronting on Third St., and 1,500 additional hotel rooms, which may be in one or several structures and have not yet been specifically sited. The existing GSA Bldg. on Fourth St. would be demolished and the land area developed as part of the site, provided the Redevelopment Agency obtains title from GSA. A pedestrian concourse, which may be covered or open, would extend from Market St. to Mission St. through the block.

Environmental Effects. The proposed land uses for CB-1 would be a mixture of retail, office, hotel and residential uses. The new mixed-use proposal could have some internal land-use conflicts if the proposed residential units are situated near areas of tourist nighttime and weekend activity. All of the proposed uses for CB-1 within the original YBC boundaries would conform to both the Redevelopment Plan, as amended, and to the C-3-R City Planning Code Use District for the area. Since the GSA site is outside the original YBC boundaries, and is currently zoned P-Public, construction of any of the proposed uses there would require a rezoning of the site to C-3-R (Downtown Retail). The height limit for CB-1 is 400 ft. Buildings containing office and retail-commercial space generally would not exceed 280 ft. in height; building heights over 280 ft. to a maximum of 400 ft. would be permitted by the Redevelopment Agency as a bonus for special undertakings of the developer elsewhere on the site and for hotel and residential uses. Tall buildings on the site near Mission St. could shadow portions of CB-2 during the afternoon in the early summer.

Three buildings on CB-1 of architectural and historic merit would be preserved: St. Patrick's Church, the Mercantile Bldg., and the Jessie St. Substation. The vacant GSA Bldg., included in the City Planning Commission's Listing of Architecturally and/or Historically Significant Buildings in the Downtown, would be demolished. It has been determined by the Regional Historic Preservation Office of the GSA to be ineligible for listing on the National Register.

The 500 market-rate housing units proposed for CB-1 would create a demand for neighborhood support services. The South of Market area currently has few of these services. Construction and operation of the project would generate greater demands from CB-1 for water, sewer services, solid-waste disposal, and police protection than would any of the YBC alternatives. All community service demands, except police services, could be met by the existing systems and would not require additional personnel or equipment. The Police Department has indicated that it would need a patrol car staffed by two officers around the clock to adequately patrol CB-1.

The new mixed-use proposal would provide about 2,900 person-years of construction employment. This would be approximately 25% more than would be generated by construction on CB-1 under YBC Alternatives A or D, the two YBC alternatives which would generate the most construction employment. The new mixed-use proposal would provide fewer permanent jobs than would YBC Alternatives A, B or D, but would provide more jobs for unskilled, entry-level workers. Of the approximately new 4,000 permanent jobs, approximately 60% would be office workers and 40% would be hotel workers. The hotel rooms proposed for CB-1 (the 700-room Arcon Pacific and the 1,500 additional rooms) would be expected to generate approximately \$3.76 million annually in hotel room tax revenues at the current tax rate of 9.75%. Forty-one percent of these revenues would be allocated for the George R. Moscone Convention Center.

The new proposal would generate more daily vehicular trips after completion than would any of the YBC alternatives. However, weekday peak-hour (4:30 - 5:30 p.m.) trips to and from CB-1 would be fewer with the new mixed-use proposal in comparison with Alternatives A and D, because fewer trips would be generated by the proposed hotel uses at peak traffic hours. The projected Muni ridership due to the CB-1 mixed-use development would be less than that for Alternatives A, B or D, but more than that for Alternative C. As with the YBC alternatives, the new mixed-use proposal would contribute to cumulative impacts on local traffic volumes, and thus on regional air quality. Because of the high ambient noise levels near CB-1, noise insulation features may be required for some of the proposed CB-1 buildings.

The projected annual operating energy demands for the CB-1 mixed-use proposal would be more than twice the demands for CB-1 under Alternative A, the YBC alternative with the highest energy demand for CB-1. The residential and hotel uses of the mixed-use proposal would require more energy for cooking, food preservation and hot water than would the predominantly office and retail structures of the YBC alternatives.

Geologic, hydrologic and seismic effects would be similar to those of the four YBC Alternatives.

Mitigation Measures. Applicable mitigation measures included in the YBC FEIR (see pages 447 - 510) would be included as part of the project. Proposed additional mitigation measures include the following. The Redevelopment Agency would evaluate proposed building designs in light of consistency with the visual character of buildings being preserved on CB-1 and with buildings neighboring CB-1. Tallest buildings on CB-1 would be set back from Mission St. to reduce shading on CB-2. On-site water reservoirs would be provided for CB-1 buildings, should the Water Department prohibit direct pumping from the mains.

The Redevelopment Agency would prepare a Transportation Management Plan to address vehicular traffic circulation and parking. Local traffic impacts could be mitigated by restricting Mission St. access to the proposed garage to right turn in and out only, and restriping of Mission Street. Proposed dwelling units and hotel rooms would be designed to meet California Noise Insulation Standards. The Redevelopment Agency would develop design criteria that would minimize use of nonrenewable energy and encourage use of renewable energy.

B. SOUTHERN BLOCK 4

The new proposal for Southern Block 4 (SB-4) within the redevelopment area boundaries is for a private high school for about 300 students. The 25,200-gross sq.-ft.-site contains a temporary parking lot and vacant land in Assessor's Parcels 3763-A and -C.

Environmental Effects. The Redevelopment Plan, as amended, and City Planning Code Use District permit high school uses on the project site. The light-industrial uses proposed in all the YBC alternatives would not be built. Demands for water, sewer services, energy, solid-waste disposal, police and fire protection, and medical services could be met by existing systems.

The private high school would generate fewer vehicular and transit trips than would YBC Alternatives B, C or D for the SB-4 site, and fewer peak-hour trips

than would any of the YBC alternatives. Traffic on Third St. and the elevated James Lick Freeway (Interstate 80) controls air pollutant levels in general and carbon monoxide (CO) concentrations in particular at SB-4. None of the YBC alternatives nor the proposed private high school would generate enough traffic on these roadways to alter local CO production or concentrations. CO concentrations at SB-4, however, currently exceed and would continue to exceed, State standards. Exterior CO concentrations would interfere with outdoor activity (causing headaches and shortness of breath) during peak traffic hours and during periods of poor pollutant dispersion.

James Lick Freeway-generated noise at the proposed school site would exceed San Francisco land use compatibility criteria for school sites. The criteria recommend that, for the anticipated noise levels, "new construction or development should generally not be undertaken." Extensive noise insulation features (such as heavy masonry construction and sealed windows) would be necessary to provide an acceptable indoor noise level for classroom activity.

The greatest earthquake hazards at the site would be groundshaking and differential settlement. As required by State law, the school would be built to conform to earthquake safety standards for schools, which are more stringent than those for light-industrial buildings.

Mitigation Measures. Applicable mitigation measures included in the YBC FEIR (see pages 447 - 510) would be included as part of the project. Proposed design mitigation measures, such as sealed windows, a recirculation type ventilation system, noise-insulating building materials, and careful site-planning, would be necessary to reduce noise and air quality impacts on the school.

I. BACKGROUND

A. REASONS FOR THIS REPORT

On November 2, 1976, the voters of the City and County of San Francisco approved a declaration of policy that "the City construct a convention exhibit hall at Yerba Buena Center (YBC) using a four percent hotel room tax to finance lease revenue bonds." The convention center site on a vacant block bounded by Howard, Third, Folsom and Fourth Sts. is in the YBC redevelopment area. An Environmental Impact Report (EIR) was jointly prepared by the San Francisco Department of City Planning and the Redevelopment Agency. The EIR evaluated and discussed four alternative development plans for the entire YBC redevelopment area, and possible variants, in as close to equal detail as was appropriate. None of the alternatives was singled out as "the project". The final project was conceived as a combination of the elements discussed in various alternatives. The November 1977 Tentative Proposal by the Redevelopment Agency, which combined elements of Alternatives A and B, was also evaluated in the EIR. The alternatives were intended to present the range of potential development alternatives and the range of potential impacts from various potential development proposals. The scope of the EIR covered the entire YBC redevelopment area, with special emphasis on the convention center. The Redevelopment Plan was subsequently amended; the November 1977 Tentative Proposal formed the basis of the amended plan, which also included elements of the other alternatives. A previous redevelopment project plan for the YBC area was the subject of an EIR, issued in May 1973 with an addendum published in July 1973, and an Environmental Impact Statement (EIS), issued on October 1974. This earlier EIR/EIS is not referred to further here, except as specifically identified.

Following certification of the current YBC FEIR on April 25, 1978, and subsequent approval by the Board of Supervisors and Redevelopment Agency Commission of the YBC Redevelopment Plan Amendment on August 13, 1979, the Redevelopment Agency sponsored an intensive competition to select the team

most capable of developing the YBC Central Blocks. On November 20, 1980 the Agency selected Olympia & York Equities, Inc. It is anticipated that Olympia & York Equities, Inc. will present its development concepts for Redevelopment Agency Commission approval by mid-summer 1981. The development concept proposed for Central Block 1 (Assessor's Block 3706), while permitted by the YBC Plan, differs from any of the alternatives discussed in the current YBC FEIR. These differences entail changed land uses and intensities of development which, when taken together, would result in new significant environmental impacts not considered in the YBC FEIR, thus requiring important revisions of that document. For instance, about 1500 transient-tourist hotel rooms have been proposed for Central Block 1 in addition to the 700-room Arcon Pacific hotel; the Arcon Pacific hotel was considered on Central Block 1 as a variant of Alternatives A, and B (YBC Final EIR, pages 56 - 57) and the Tentative Proposal (YBC FEIR, page 60). Five-hundred market-rate dwelling units have been proposed for the block, rather than the 100 and 200 units previously proposed in Alternatives B and C, respectively. The Redevelopment Agency is also considering the acquisition and development of the site now occupied by the General Services Administration (GSA) Bldg. at 49 Fourth St., adjacent to the boundaries of the YBC redevelopment area on Central Block 1. Inclusion of the GSA site was considered, but only as a variant of Alternative B, on page 48 of the YBC Final EIR. In addition, the Agency has recently received a proposal from Bridgemont High School to construct a private high school on Southern Block 4 (Assessor's Block 3763). A decision by the Redevelopment Agency Commission on the land disposition agreement with Bridgemont High School is expected by mid-summer of 1981. Although a downtown high school was considered in Alternatives A and B (YBC Final EIR, pages 56 - 57), this type of facility was not included in the environmental analysis of Southern Block 4, and would result in significant environmental impacts requiring important revisions of the YBC FEIR.

This document has been prepared, therefore, as a Supplement to the Yerba Buena Center Final Environmental Impact Report (EE 77.220, State Clearinghouse No. 7801163), certified by the San Francisco Planning Commission and San Francisco Redevelopment Agency. The Yerba Buena Center Final EIR (including Appendices and Responses to Comments) is hereby incorporated in its entirety into this document by reference, as provided for in Section 15149 of

the Guidelines for Implementation of the California Environmental Quality Act (CEQA) (CAC Title 14, Division 6, Chapter 3). The Yerba Buena Center Final EIR is hereinafter referred to as the YBC FEIR; relevant portions are briefly summarized throughout this document, as appropriate, and reference page numbers provided. Copies of the YBC FEIR are available to the public for inspection at the Office of Environmental Review of the Department of City Planning, the offices of the Redevelopment Agency, and the San Francisco Public Library.

B. HISTORY OF REDEVELOPMENT IN THE SOUTH OF MARKET AREA

The California Community Redevelopment Law was adopted in 1945 as a basis for fostering new building and development programs after World War II in urban areas identified as blighted under terms of the law. The San Francisco Board of Supervisors established a Redevelopment Agency in 1948. In 1953 the Board of Supervisors designated 19 blocks as Redevelopment Area "D" in the South-of-Market district. In 1961 Area "D" was redesignated with different boundaries. The first official Redevelopment Plan was adopted by the Board of Supervisors on April 25, 1966. Interim plans for redevelopment of the area, and litigation involving redevelopment activity in the South-of-Market area are discussed in detail in the YBC FEIR, pages 3 - 11.

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C. DECISION-MAKING PROCEDURES

The official Redevelopment Plan for YBC, most recently amended on August 17, 1979, would not have to be amended in order to implement the proposals for Central Block 1 (CB-1) and Southern Block 4 (SB-4) evaluated in this Supplement. All of the uses considered for the two blocks are permitted principal land uses for the Land Use Districts in which they are proposed.

As in the processing of the YBC FEIR, the Redevelopment Agency and City Planning Commission will act as joint lead agencies for this EIR Supplement. Pursuant to Section 15085(g) of CEQA, these two decision-making bodies must certify that the EIR Supplement is adequate, accurate and objective prior to

the beginning of development of CB-1 and SB-4. The responsibility for implementation of the Redevelopment Plan is vested in the Redevelopment Agency, which is authorized to acquire and sell land parcels, establish conditions of use, and review and approve building and landscaping plans. This authorization flows from the State Community Redevelopment Law by means of the adoption of the Redevelopment Plan by the Board of Supervisors.

The GSA site would be subject to a rezoning by the City Planning Commission, as required (see further discussion in Section A-VI.A). The application for the rezoning would be initiated by the Redevelopment Agency. Since the GSA site is outside the boundaries of the redevelopment area, development on that site would be in accordance with the City Planning Code, as may be required.

The San Francisco Redevelopment Agency would apply to the City for vacation of the portion of Jessie St. on the block. Jessie St. is surrounded on three sides by the CB-1 site. The City Planning Commission must report on compliance of the application to vacate a portion of Jessie St. with the Comprehensive Plan for the City and County of San Francisco. The Board of Supervisors must take final action on this application.

II. GENERAL AREA DESCRIPTION

A. REGIONAL AND LOCAL CONTEXT OF THE REDEVELOPMENT AREA

YBC (see Figures 1, 2, and 3 in the YBC FEIR, pages 15, 17, and 19) is a part of the larger South-of-Market district of San Francisco, which extends generally from The Embarcadero on the Bay shore to Eleventh St. on the west, and from Market St. on the north to China Basin and Townsend and Division Sts. on the south (Census Tracts 176, 178, 179, 180). The South-of-Market district is different from other parts of San Francisco in several respects. The street pattern is skewed approximately 45 degrees from the typical north-south and east-west orientation of most of the San Francisco grids. (For ease of description, and in line with local custom, the northeast-southwest oriented streets such as Mission, Howard, and Folsom are considered as east-west streets in this report, and the northwest-southeast oriented streets such as Third and Fourth are considered as north-south streets.) The area is generally flat; only the cut-down remnants of Rincon Hill, centered in the area between First and Second Sts., provide topographic variety (see Figure 24, page 193 of the YBC FEIR). Block lengths are the longest in the City, measuring 825 feet on the east-west streets and 550 feet on the north-south streets.

The South-of-Market district serves as the entrance to downtown San Francisco for persons coming from the east over the San Francisco Bay Bridge or from the south via the Southern Pacific Railroad and freeways serving Santa Clara and San Mateo Counties on the San Francisco Peninsula. For further information on the context and history of the redevelopment area, see pages 13 - 22 of the YBC FEIR.

B. DESCRIPTION OF THE YERBA BUENA CENTER AREA AND VICINITY

Clearance of the YBC area began in 1970 and, except for the few remaining buildings intended to be demolished in accordance with the then Redevelopment Plan, was completed in 1974. The clearance process required the relocation of approximately 3,000 residents, most of whom were single and/or elderly.

Throughout the EIR the blocks in the YBC area are designated, as indicated in Figure 4, page 23 of the YBC FEIR, by a combination of letters and numbers, with the letters indicating the general location within YBC. For example, EB-1 means Eastern Block 1. Assessor's Block numbers are also shown in the legend of Figure 4, page 23 in the YBC FEIR.

The dominant interim use in the YBC area is in the form of temporary parking. Among the remaining buildings, two on Central Block 1 have been designated as landmarks by the San Francisco Board of Supervisors: St. Patrick's Church and the Jessie St. Substation (the latter is on the National Register of Historic Places; see Section A-V. M.). Construction has begun on several of the buildings proposed in the amended 1979 Redevelopment Plan and covered in the YBC FEIR, including the George R. Moscone (formerly Yerba Buena) Convention Center and the Yerba Buena West development.

Several forms of transit serve Yerba Buena Center directly or indirectly ("direct" service denotes transit vehicles passing through YBC; "indirect" service denotes transit agencies with terminals outside YBC, but accessible by walking, direct transit, taxi or jitney). The transit routes directly serving YBC include those of: San Francisco Municipal Railway (Muni); San Mateo County Transit (SamTrans); Golden Gate Bridge, Highway and Transportation District Transit (Golden Gate Transit) buses; and the Bay Area Rapid Transit (BART) District. These routes are located principally on Market, Mission, Howard and Folsom Sts. in the east-west direction, and Third, Fourth and Fifth Sts. in the north-south direction. Jitneys run along Mission St., and along Third and Fourth Sts., serving the Southern Pacific Terminal. Indirect service includes the Alameda Contra Costa Transit District (A-C Transit) and the Golden Gate Transit ferry system.

The eastern portion of the YBC area abuts the southern extension of the Financial District along New Montgomery St., and is the site of further southward expansion of the office uses on Hawthorne, Folsom, and Third Sts. The Market St. gateway to the area, opposite Grant Ave., is at the southeastern edge of the Union Square retail shopping and hotel district, a concentrated downtown activity area. The southern edge of the area is predominantly industrial in use and is dominated by the Bay Bridge approach and Central Skyway structures. West of the YBC area, dominant uses are either residential or are commercial uses of a type which relate to and support the more-intensive downtown activities. Sixth St. contains retail outlets serving residents of the area, and hotels catering to permanent residents.

III. APPROACH TO THE EVALUATION OF ENVIRONMENTAL IMPACTS

A. GENERAL APPROACH

Since this document is a Supplement, it need only contain the information necessary to revise the YBC FEIR so that it adequately covers the impacts of the new mixed-use proposal for CB-1 and the private high-school proposal for SB-4. For easy reference, the Supplement is organized in a similar manner to the YBC FEIR. The Supplement is in two parts. Part A, following, contains the analysis of the mixed-use development proposal on CB-1 (Sections A-IV through A-XI). Part B, following that, contains the analysis of the private high-school proposal on SB-4 (Sections B-IV through B-XI). The Summary and Sections I through III and XII through XIV pertain to both proposals.

For the analysis of the new proposals for CB-1 and SB-4, the impacts of development on each site have been analyzed. Of the proposals evaluated in the YBC FEIR the 1977 Tentative Proposal most closely approximates the current Redevelopment Plan for YBC as a whole; information on Alternatives A, B, C and D is presented for comparison with the impacts of development on CB-1 and SB-4 as evaluated for the four alternatives considered in the YBC FEIR. The YBC FEIR analyzed cumulative development impacts for all of the YBC Redevelopment Area. All cumulative impacts of the new proposals for CB-1 and SB-4 evaluated in this Supplement are considered to be adequately covered, therefore, by the analysis and comparison for each site presented in this document and are not given further specific discussion. CB-1 in this Supplement refers to the GSA site and that portion of Assessor's Block 3706 within the YBC boundaries. SB-4 is that portion of Assessor's Block 3763 within YBC. In the quantification of impacts, the same methods have generally been used as were used in the YBC FEIR to facilitate comparison among the alternatives (see pages 27 - 30 of the YBC FEIR for more detail on the approach to the evaluation of environmental impacts used in the YBC FEIR). More-recent data available from the San Francisco Hilton Hotel and Tower,

III. Approach to the Evaluation of Environmental Impacts

located about one-third mile west of CB-1, were used for evaluating the impacts of the proposed hotel rooms.

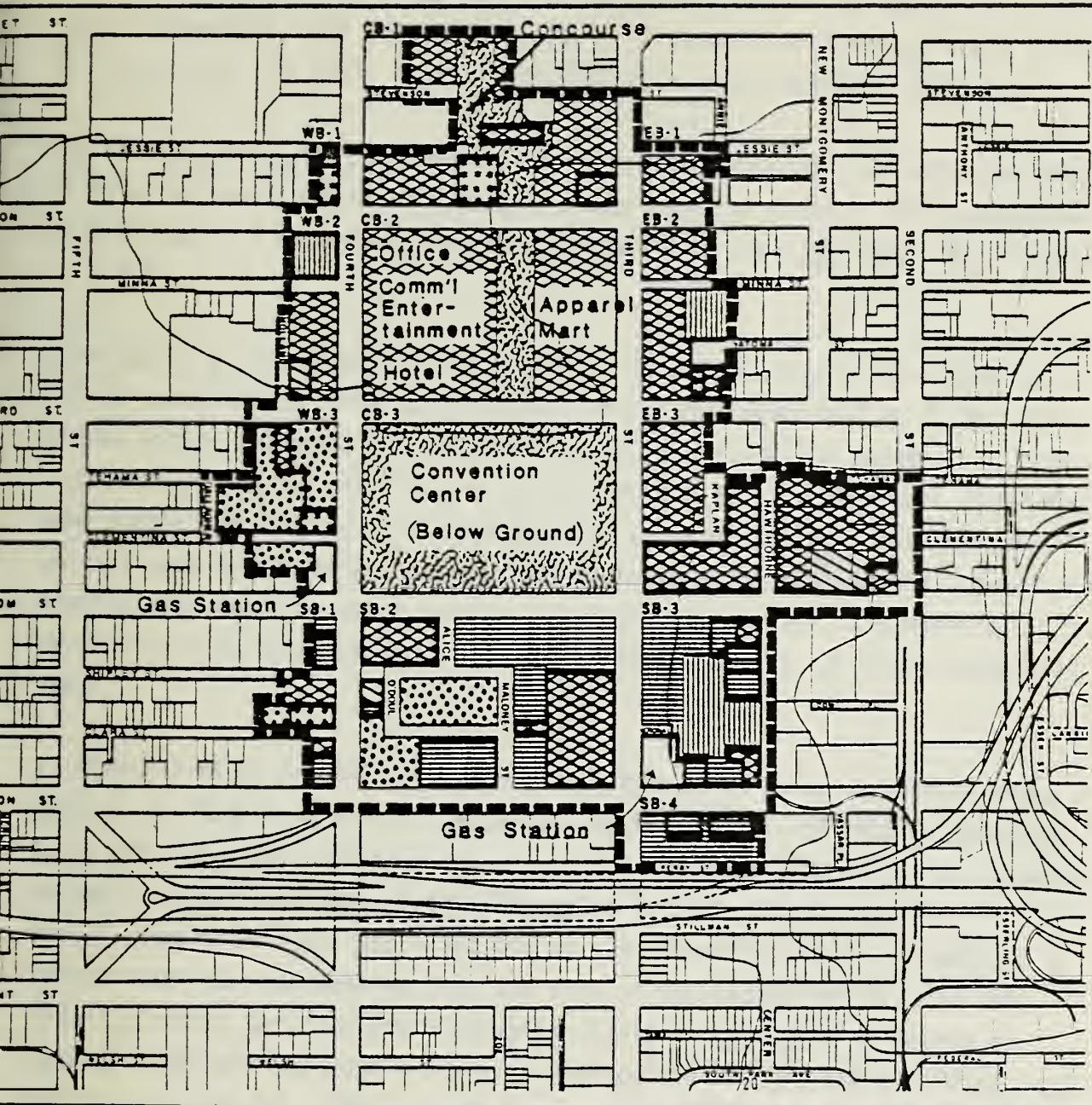
Where the impacts of the new proposals would differ from those identified in the YBC FEIR, the differences have been stated. Where the impacts would not differ, the types of information have been briefly summarized and incorporated by reference. All impacts have been considered in the 1988 time frame used in the YBC FEIR. For the purposes of this analysis, the 49 Fourth St. site, covering about 48,000 sq. ft. of land area and occupied by the vacant 312,000-gross-sq.-ft. GSA Bldg., has been considered a part of the CB-1 site and included in all calculations.

B. DESCRIPTION OF THE FOUR ALTERNATIVES EVALUATED IN THE YBC FEIR

Each redevelopment area alternative in the YBC FEIR consisted of existing, committed and "discretionary" land uses. Discretionary uses were those proposed land uses that varied among the four alternatives; in fact, they tended to define each alternative. The following description of the alternatives refers to the discretionary uses unless otherwise noted.

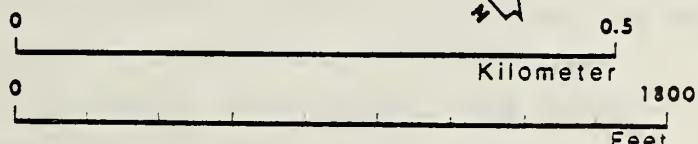
Alternative A was based on the official Redevelopment Plan for YBC, as amended through 1977 (see Figure 1). Within the entire YBC area, this alternative would provide for about 6 million sq. ft. of office space in high-rise buildings; about 700,000 sq. ft. of retail uses; a hotel on CB-2; indoor commercial entertainment facilities; the convention center; a pedestrian concourse and urban plazas extending from Market St. to Howard St.; four (committed) sites for subsidized housing for the elderly (602 dwelling units) and one market-rate housing development (50 dwelling units) atop a proposed office building (apparel mart); light industrial uses (about 1 million sq. ft.); and two public parking garages.

In Alternative A, in CB-1 only, the pedestrian concourse would consist of a landscaped and paved plaza extending southward from the YBC Market St. gateway, opposite Grant Ave. It would extend around and through the Jessie St. Substation and along St. Patrick's Church to Mission St. The



LEGEND

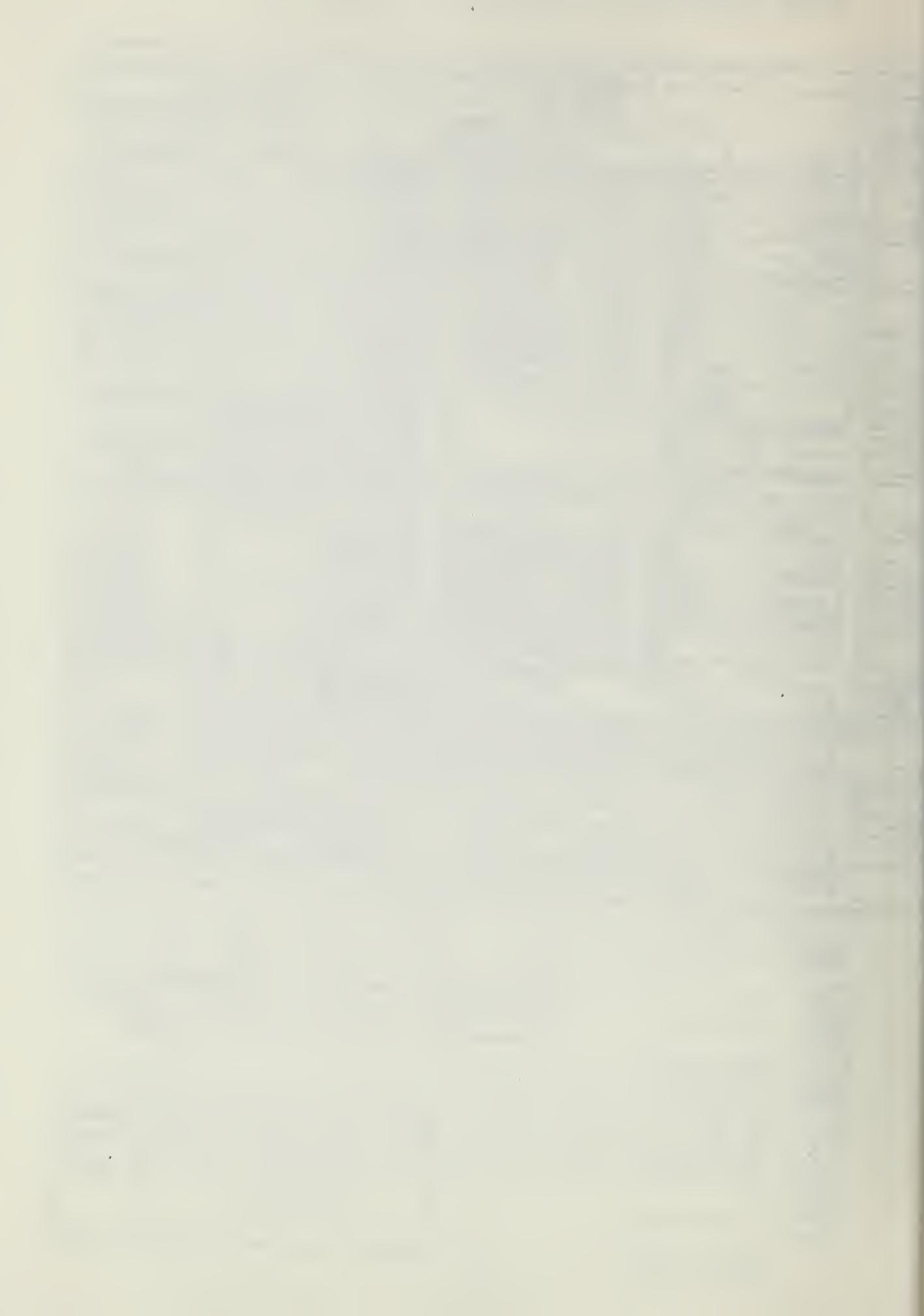
- Housing
- Office & Retail
- Downtown Support
- Light Industry
- Parking
- Community Service
- Park
- Existing, to Remain



YBC FEIR
ALTERNATIVE A

1

Source: YBC FEIR



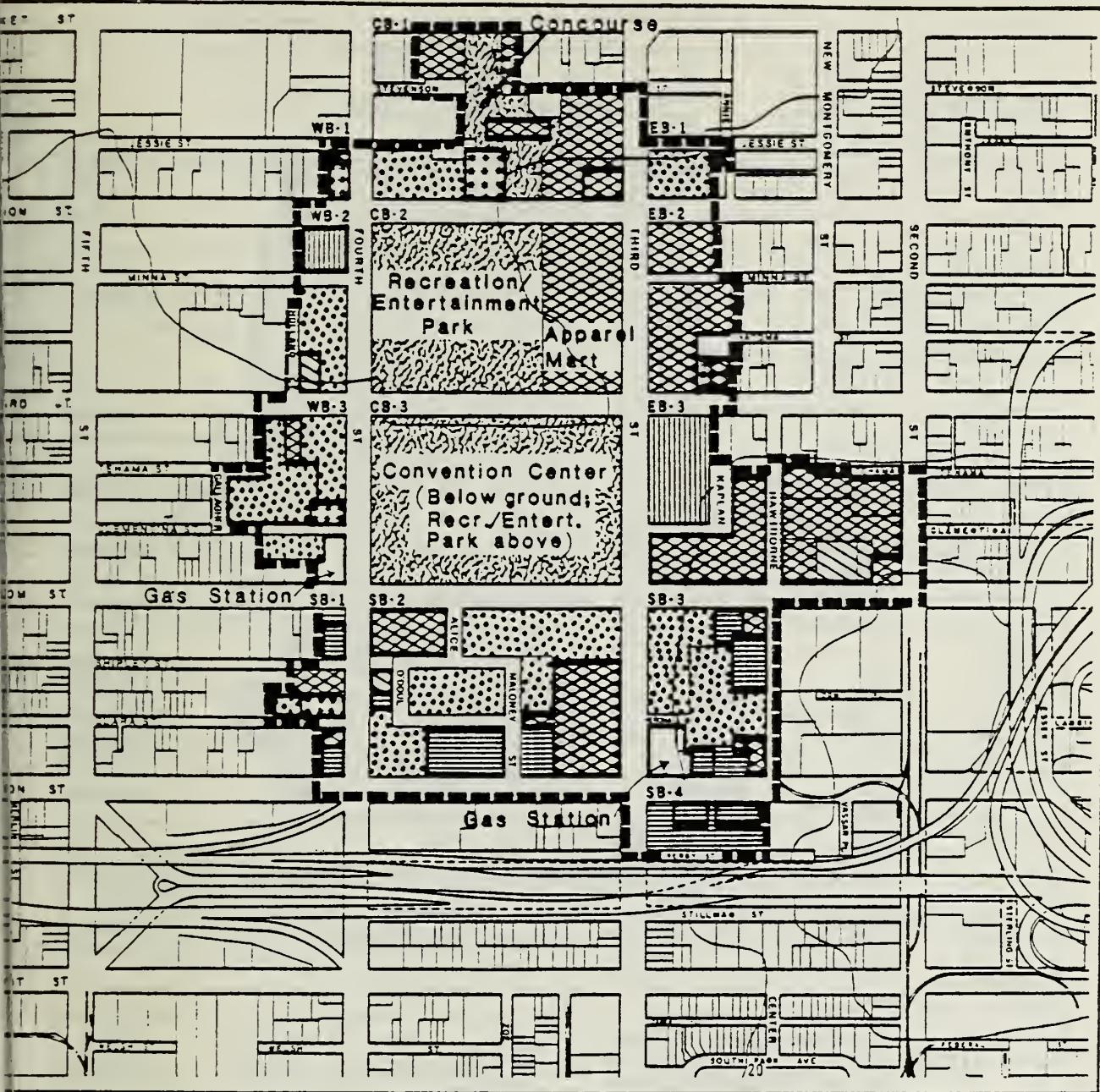
pedestrian concourse would be adjoined by office uses (1,880,000 sq. ft.) and retail-commercial uses (240,000 sq. ft.). A pedestrian overpass would connect CB-1 and CB-2. In SB-4, light-industrial uses would dominate the block.

The Redevelopment Agency November 1977 Tentative Proposal combined components of Alternatives A and B. Alternative A was taken as a base, with components of Alternative B replacing some of A's components (see YBC FEIR, pp. 58 and 60 - 61).

Alternative B (see Figure 2) was based on recommendations of the Mayor's Select Committee on Yerba Buena Center, which were submitted in August 1976. In the entire YBC area, this alternative would provide for about 3 million sq. ft. of office space; about 300,000 sq. ft. of retail uses; the same subsidized housing for the elderly as in Alternative A (602 dwelling units); subsidized-family housing (300 dwelling units); additional market-rate housing (650 dwelling units total); the convention center; a commercial recreation/entertainment park; and about 350,000 sq. ft. of light-industrial uses.

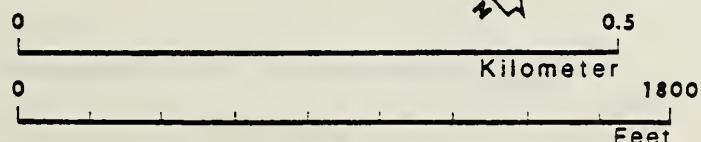
In Alternative B, in CB-1 only, the parcel between Mission and Jessie Sts., west of St. Patrick's Church, would have 40,000 sq. ft. of retail-commercial space and 100 units of market-rate housing. The remainder of the block would be substantially the same as in Alternative A, with 121,000 sq. ft. of retail-commercial space and 1,250,000 sq. ft. of office space. The Mayor's Select Committee recommended that the site of the vacant building of the federal General Services Administration (GSA), which fronts on Fourth St. between Stevenson and Jessie Sts., be included in YBC for use by offices and market-rate housing. Use or disposition policy pertaining to the site has not been determined by the GSA; for that reason, redevelopment of the site was not included in the alternatives nor in the area and use computations, but was considered as a variant. Proposed new development in SB-4 included 176,000 sq. ft. of light-industrial space. As a variant, some of the undeveloped parcels could be used for off-street parking spaces.

Alternative C (see Figure 3, page 13) for the entire YBC area was based on a concept derived from public suggestions and comments made on the original



LEGEND

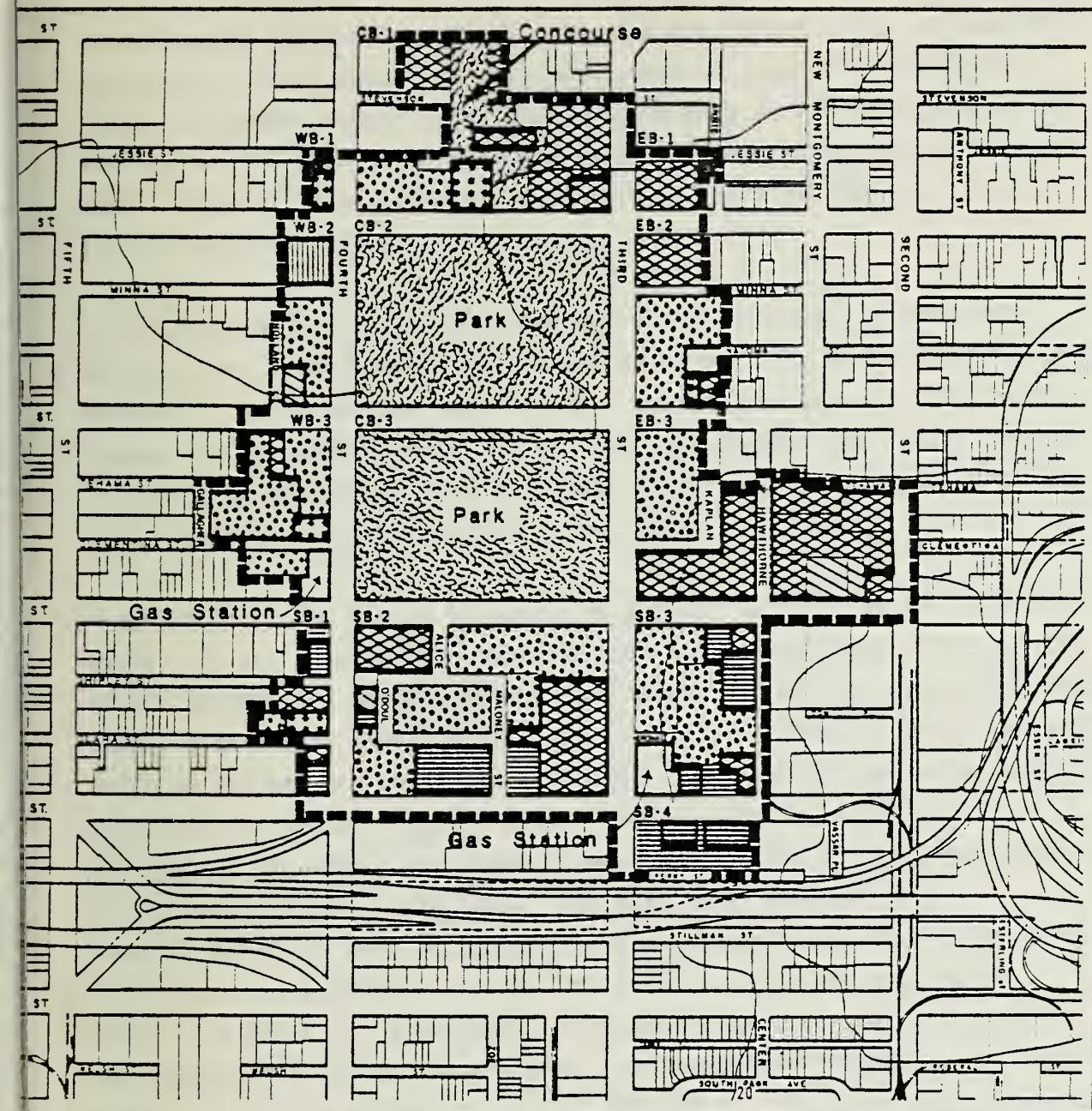
- Housing
- Office & Retail
- Downtown Support
- Light Industry
- Parking
- Community Service
- Park
- Existing, to Remain



YBC FEIR
ALTERNATIVE B

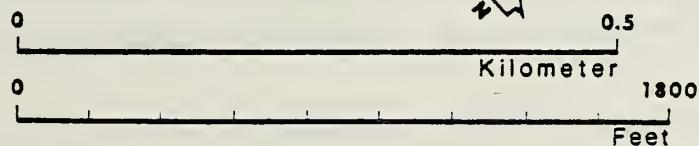
2

Source: YBC FEIR



LEGEND

- Housing
- Office & Retail
- Downtown Support
- Light Industry
- Community Service
- Park
- Existing, to Remain



YBC FEIR
ALTERNATIVE C

3

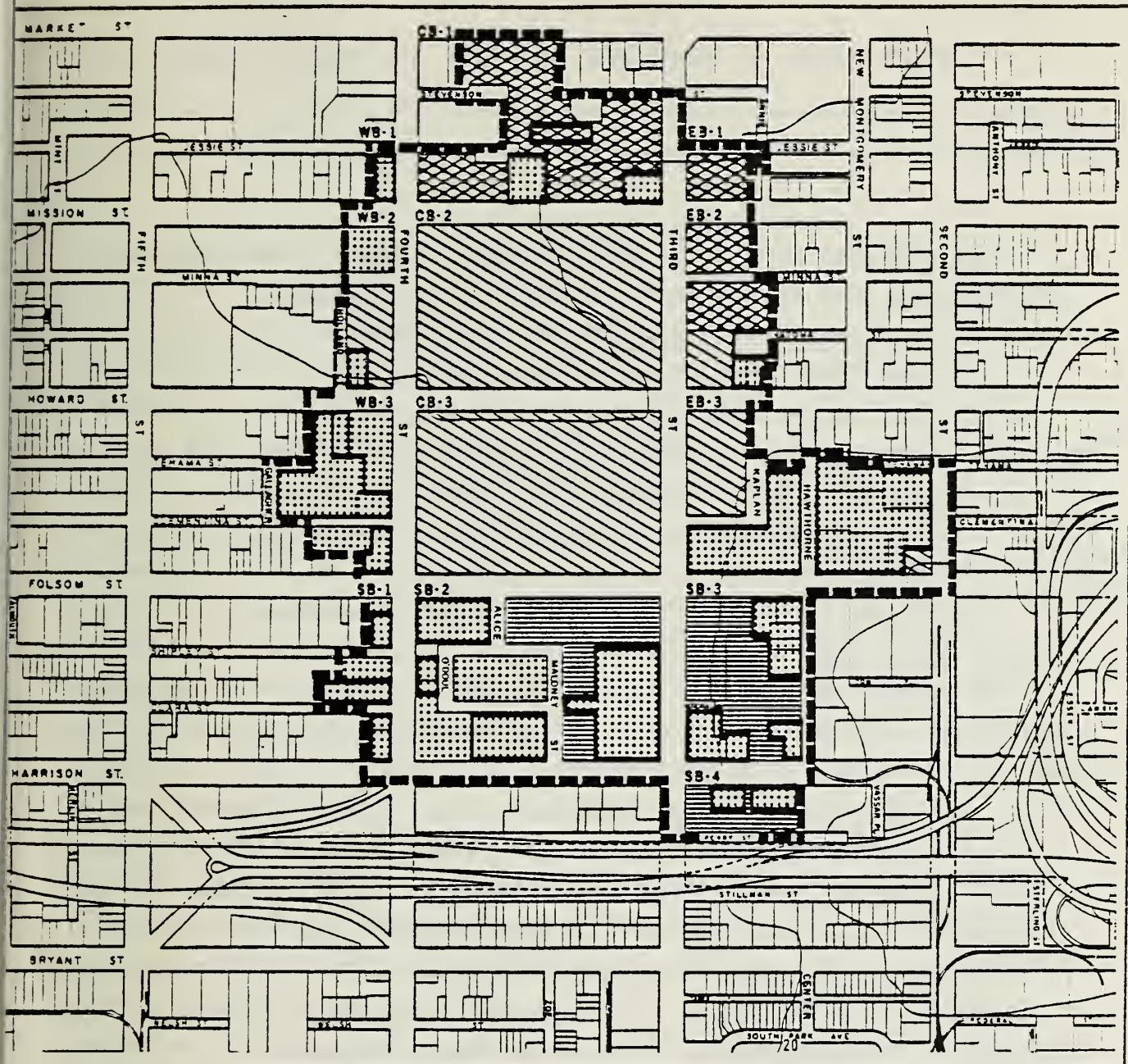
III. Approach to the Evaluation of Environmental Impacts

redevelopment plans and on the earlier EIR and Federal EIS. It included a two-block, 21-acre public park and contained no convention center nor recreation/entertainment park. It included more market-rate housing than Alternative B (1,000 dwelling units total) and about half the office and retail space of that alternative, as well as about 350,000 sq. ft. of light-industrial uses.

In Alternative C, in CB-1 only, the pedestrian concourse included in Alternatives A and B would be retained as an activity plaza and gateway from Market St. to the central public park. New office space in CB-1 would be reduced to approximately 750,000 sq. ft., and market-rate housing would be increased to 200 units at the northeast corner of Mission and Fourth Sts. In SB-4, light-industrial uses were proposed.

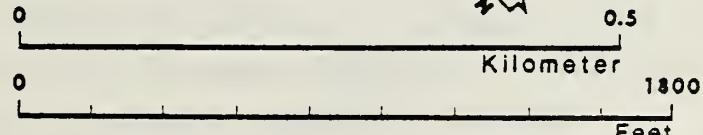
Alternative D (see Figure 4) was a "no action" alternative for YBC as a whole. It was based on the revocation of the Redevelopment Plan and the sale of all uncommitted parcels on the open market for private uses which would comply with zoning laws. A variant of this "no action" alternative is one in which no further action of any kind would be taken and the vacant parcels would remain in their present state. The available lot area in CB-1 (97,000 sq. ft. within the redevelopment area) would be developed under the C-3-R zoning district standards. The main permitted uses are retail-commercial and office uses, with a maximum gross floor area ratio of 10:1; that is, a ratio of ten sq. ft. of floor space to one sq. ft. of lot area. The block is in the 400-I Height and Bulk District, which permits a maximum building height of 400 feet. Approximately 100,000 sq. ft. of retail space could be developed and up to 2,000,000 sq. ft. of office space could be accommodated. Housing would be permitted. In SB-4, there would be 35,000 sq. ft. of land available for industrial development along Perry St. This could accommodate approximately 175,000 sq. ft. of industrial space.

For further description of the four alternatives, refer to pages 31 - 62 of the YBC FEIR.



LEGEND

- Office & Retail
- Downtown Support
- Light Industry
- Existing, under construction, or committed*
- Existing, to remain



* See Figure 1, 2, 3, for actual use.

Source: YBC FEIR

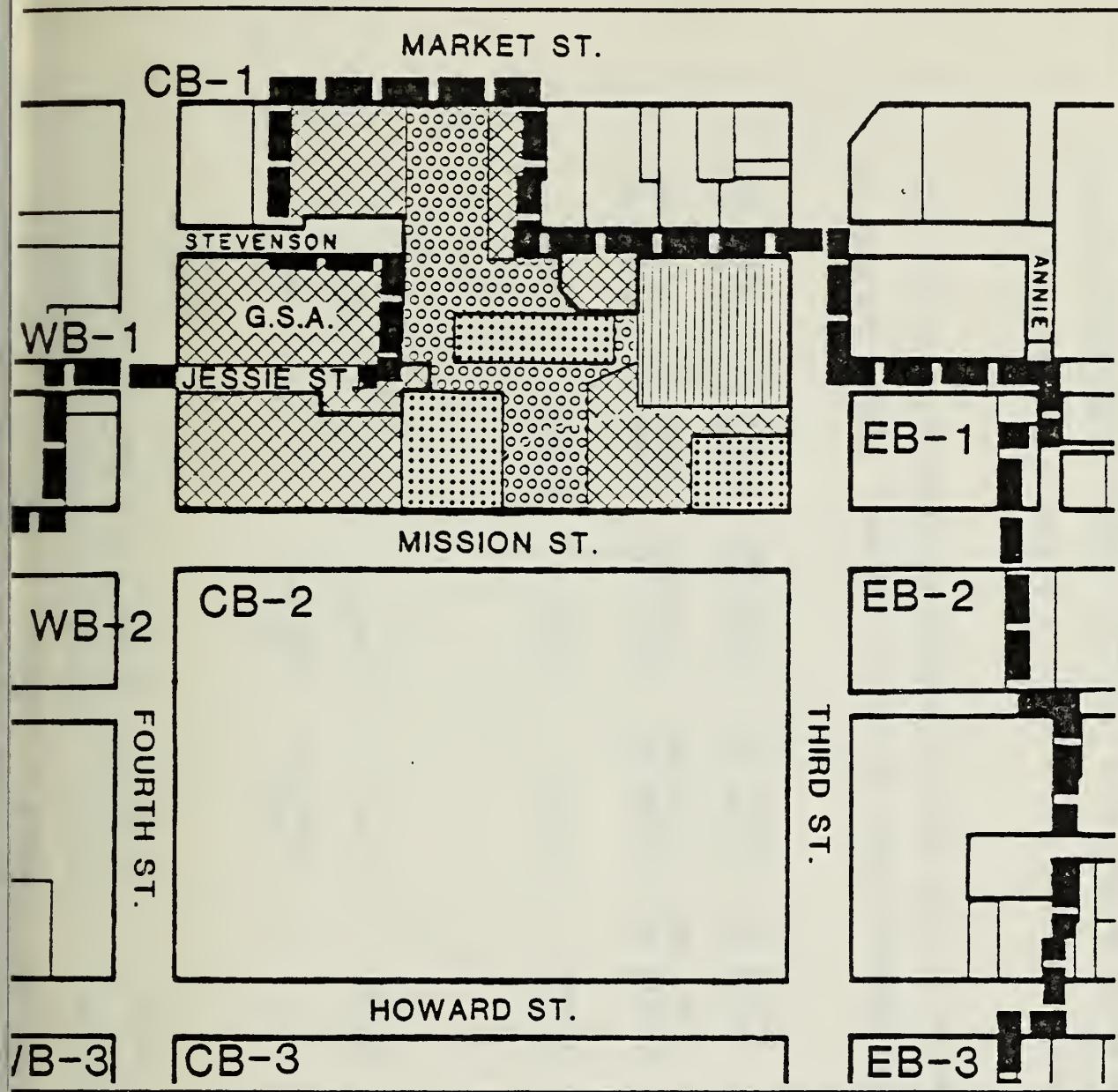
YBC FEIR
ALTERNATIVE D

4

A-IV. PROJECT DESCRIPTION: MIXED-USE DEVELOPMENT ON CENTRAL BLOCK 1

The new mixed-use proposal for Central Block 1 (CB-1) to be evaluated in Part A of this Supplement differs from the mixes of uses considered for CB-1 in any of the four alternatives in the YBC FEIR (see Figures 1 - 4, pages 10, 12, 13 and 15) or in any possible combination thereof. As in the four alternatives, the existing St. Patrick's Church would be retained and the existing Mercantile Bldg. and Jessie St. Substation would be rehabilitated and adaptively reused for office and retail-commercial uses. The proposal provides for a pedestrian concourse (similar to that proposed in YBC Alternatives A, B and C) which may be covered or open, linking Market St. with Mission St.; approximately 500,000 gross sq. ft. of office space and approximately 80,000 gross sq. ft. of retail-commercial space (both including renovation of the existing Jessie St. Substation); up to 500 market-rate dwelling units; a 700-room Arcon Pacific transient-tourist hotel fronting on Third St./1/, and 1,500 additional transient-tourist hotel rooms to be located in one or more buildings. As in Alternative A, pedestrian-level uses generally would be retail commercial. The portion of Jessie St. within CB-1 would be vacated. The proposed office and retail-commercial space, additional 1,500 hotel rooms and 500 market-rate dwelling units could occur anywhere on the site not occupied by existing buildings or proposed for the Arcon Pacific hotel or pedestrian concourse (see Figure 5). Table 1 on p. 18 presents a comparison of proposed mixed uses on CB-1 with uses proposed in the YBC FEIR.

The existing GSA Bldg. on Fourth St. would be demolished, and the land area included as part of the site. Although the GSA site is included in CB-1 for this Supplement, it is not part of the YBC Redevelopment Area. The General Services Administration has not yet concluded negotiations with the San Francisco Redevelopment Agency for the property. Until such negotiations are concluded, the GSA is considering construction of a new federal office building on the 49 Fourth St. site.



LEGEND

Mixed Use: Office, Retail-Commercial,
Hotel Space and Housing

Arcon Pacific Hotel Site

Pedestrian Concourse

Existing Buildings, to Remain

YBC Area Boundary

NOTE: Locations of proposed uses
are approximate, except for
the Arcon Pacific Hotel Site.



PROPOSED MIXED-USE
DEVELOPMENT ON CB - 1

5

<u>Use</u>	<u>Existing</u>	<u>Alt. A</u>	<u>Alt. B</u>	<u>Alt. C</u>	<u>Alt. D</u>	<u>Proposed</u>
Office	--	1,785,000	1,200,000	610,000	1,733,000	490,000
Retail-Commercial	--	214,000	96,900	99,000	227,000	65,000
Hotel Rooms	--	--	--	--	--	2,200 ++ (Rooms)
Dwelling Units	--	--	100 (MDUs)***	200 (MDUs)***	--	500 (MDUs)***
Pedestrian Concourse	--	81,000 +	81,000 +	81,000 +	--	81,000 +
Temporary Parking	227,000 +	--	--	--	--	--
<u>Existing Buildings to be Retained:</u>						
St. Patrick's Church and Rectory	21,000 +	21,000 +	21,000 +	21,000 +	21,000 +	21,000 +
Mercantile Building	81,800 (VB) 9,000 (RC)	82,000 (0) 9,000 (RC)	82,000 (0) 9,000 (RC)	82,000 (0) 9,000 (RC)	82,000 (0) 9,000 (RC)	82,000 (0) 9,000 (RC)
Jessie St. Substation	25,000 (VB)	10,000 (0) 15,000 (RC)				
<u>VB - Vacant Building</u>						
0 - Office						
RC - Retail-Commercial						

*Existing and increases are within YBC boundaries only; GSA site not included. Numbers are given in square feet unless otherwise noted.

** Includes build-out within YBC area on CB-1 plus GSA site. Numbers are given in square feet unless otherwise noted.

*** Market-rate dwelling units.

+Approximate land surface area only

++ Includes 700-Room Arcon Pacific hotel; this hotel was on CB-1 as a variant in Alternatives A and B and the November 1977 Tentative Proposal

SOURCE: San Francisco Redevelopment Agency and Appendix A, Table A-1, page 1, in YBC FEIR Appendices

Proposed buildings containing office and retail-commercial space generally would not exceed 280 ft. in height; building heights above 280 ft. to a maximum of 400 ft. would be permitted by the Redevelopment Agency as a bonus for special undertakings of the developer elsewhere on the site and for residential and hotel uses. Any such height bonus would be negotiated with the Redevelopment Agency. Building heights would be lower than 280 ft. as required to provide light and sun to open spaces. Development on CB-1 within the IBC area would conform to the current Redevelopment Plan. Development on the GSA site would be in accordance with the City Planning Code, as may be required.

Parking space would be provided at a maximum rate of 7% of the gross floor area for hotel, office and retail uses. This is projected to be about 110 spaces for office and retail uses, 90 spaces for the Arcon Pacific hotel and 200 spaces for the 1,500 additional hotel rooms. A minimum of one space for each four dwelling units would be provided. This would be a minimum of 125 spaces. No new parking would be constructed for the existing Mercantile Bldg.

It is assumed for purposes of analysis that there would be three points of access to / egress from the parking areas on the site. The 90 spaces for the Arcon Pacific hotel would thus be accessible from Third St. in the vicinity of the hotel. The remaining 435 spaces would thus be accessible from one point midblock on Fourth St. and one point on Mission St. just west of St. Patrick's Church.

FOOTNOTES

/1/ The 700-room Arcon Pacific hotel was evaluated on CB-1 in the YBC FEIR as a variant of Alternatives A and B and the November 1977 Tentative Proposal (YBC FEIR, pages 56, 57 and 60); as variants, development of the 700 hotel rooms on CB-1 was considered to be instead of, not in addition to, the hotel development on CB-2 proposed under Alternative A. Were the new mixed-use proposal to be implemented, the hotel rooms on CB-1 would again be instead of (rather than in addition to) hotel rooms on CB-2.

A-V. ENVIRONMENTAL SETTING (Central Block 1)

A. LAND USE, ZONING, AND VISUAL ASPECTS

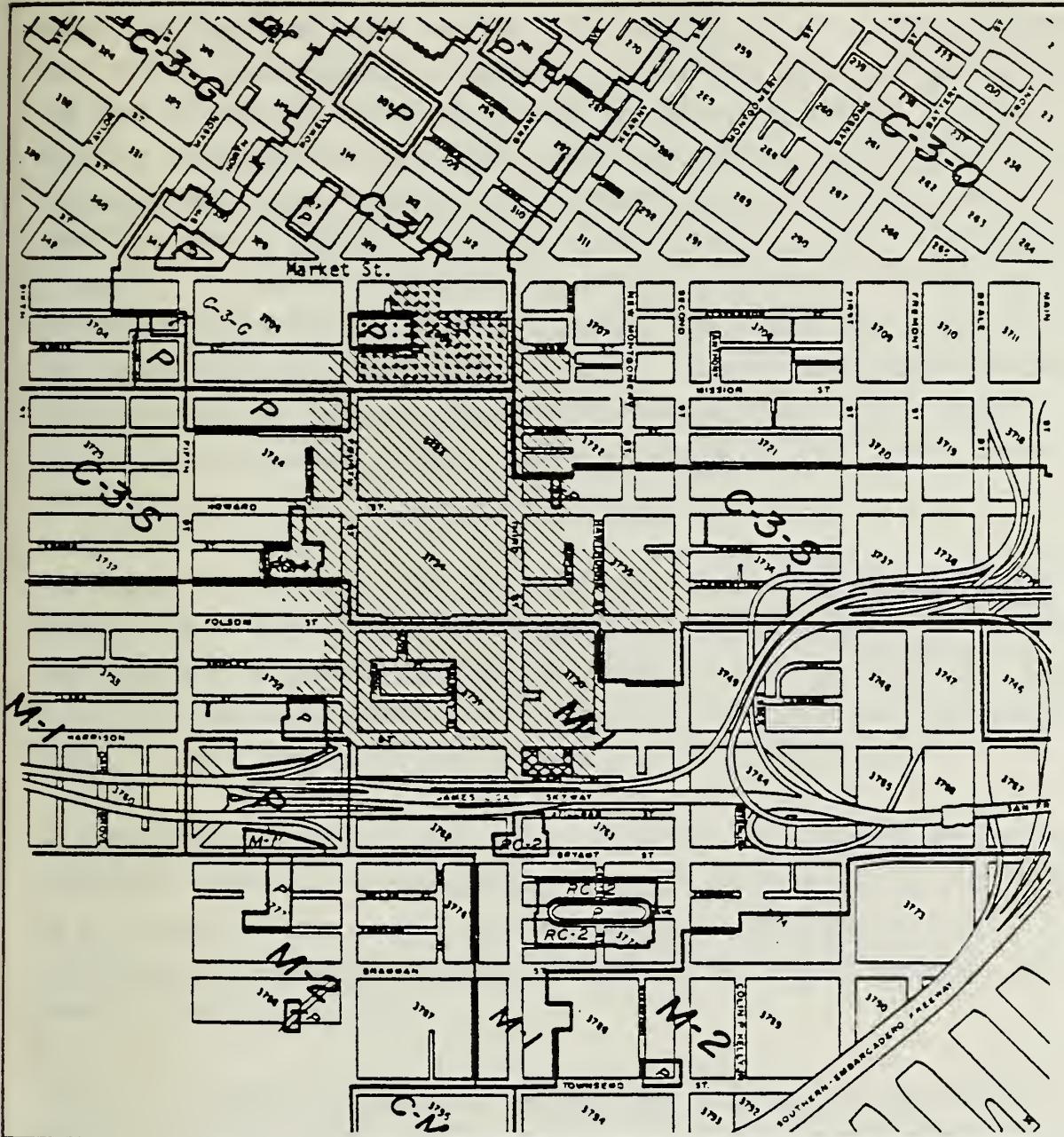
1. LAND USE

Land use in the area surrounding the Yerba Buena Center is described in detail in the YBC FEIR on pages 63 - 64. An overview of the land use in the Yerba Buena Center itself is presented on pages 64 - 68 of the YBC FEIR.

Much of Central Block 1 is an open area, most of it used for temporary parking. Six parking lots, containing about 660 spaces, cover 45% of the total block area. There is a rubble-strewn area, excavated below street level, at the northeast corner of Mission and Fourth Sts., and two vacant buildings (one of five stories and one of ten stories) outside the redevelopment area and immediately adjacent to the General Services Administration (GSA) building, which is on the corner of Stevenson and Fourth Sts. The 312,000 sq.-ft.-GSA Bldg., formerly used for governmental offices, is currently vacant.

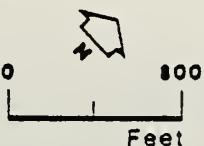
2. ZONING

CB-1 is located in two City Planning Code Use Districts (see Figure 6). The GSA building site is zoned P, Public District. The rest of CB-1 is zoned C-3-R, Downtown Retail District. The City Planning Code describes the C-3-R district as one of retail and consumer-service uses. The Code permits dwelling units in this district, but the maximum density ratio may not be less than one dwelling unit for every 125 sq. ft. of lot area./1/ Hotels (but not motels) are permitted; professional and business offices, recreational buildings, and residential care facilities are also permitted. The Code is specific concerning ground-level uses in this district: uses are restricted to office and retail; all other permitted uses must be on stories other than ground level, or 20 feet behind the front of the building./2/ The basic



LEGEND

- C-3-O Downtown Office District
- C-3-R Downtown Retail District
- C-3-S Downtown Support District
- C-3-G Downtown General Commercial District
- M-1 Light Industrial District
- M-2 Heavy Industrial District
- P Public Use District
- RC-2 Residential Commercial Combined District (Moderate Density)
- RC-4 Residential Commercial Combined District (High Density)
- CB-1 Site
- SB-4 Site
- YBC Area



PLANNING CODE USE
DISTRICTS IN YBC
AND VICINITY

6

permitted Floor Area Ratio for the C-3-R district is 10:1, i.e., buildings may have a floor area (excluding mechanical and parking space) of up to ten times the area of the site./3/ Under a bonus system established by Section 126 of the City Planning Code, additional space is permitted as specified for design features that improve pedestrian and transit access to the building and offer amenities such as multiple entrances, parking access, plazas, and widened sidewalks. On May 27, 1980 the Board of Supervisors established interim controls limiting the use of this section of the City Planning Code to hotels and residential uses (Ordinance No. 240-80). Use of development bonuses for hotels and residential uses is permitted through the Conditional Use authorization procedure of the City Planning Commission. Unless extended, these interim controls will end in July 1, 1981.

The P district, or Public Use District, applies to land owned by a government agency, and in some form of public use, including open space./4/ Conditional uses (subject to approval by the City Planning Commission) include: medical facilities, schools, community facilities, or a "planned unit development" (PUD), as specified by Section 304 of the City Planning Code./5/

No off-street parking is required for individual commercial buildings in the C-3-R district./6/ accessory parking is permitted to occupy an area of up to 7% of the gross floor area of such buildings./7/ Although Section 151 of the City Planning Code requires off-street parking for hotels, an exemption is given in the C-3-R district.

The site is located in the 400-I Height and Bulk District (see Figure 11, page 77 of the YBC FEIR). The maximum permitted height is 400 feet. Above a height of 150 feet, the maximum permitted length of a building tower is 170 feet, and the maximum permitted horizontal diagonal dimension is 200 feet./8/

The San Francisco Redevelopment Agency has established the Official Redevelopment Plan for the Yerba Buena Center Approved Redevelopment Project (reprinted September, 1979), which is hereby incorporated by reference. The Redevelopment Plan Map, on page 40 of the Redevelopment Plan, shows CB-1 (not including the GSA site) mapped within Land Use District B, Downtown Retail.

Among the principal permitted uses in this District are: business and professional offices, retail stores, restaurants, churches, off-street parking, and hotel uses. Permitted uses in this Redevelopment Plan District also include residential development, which is confined to the space above the first story, and which uses ground level space for access only (Redevelopment Plan, page 6).

Specific development standards in the Redevelopment Plan generally conform to those of the City Planning Code. The Redevelopment Plan was established before the adoption of interim controls by the Board of Supervisors, so bonuses of additional floor space for certain structural amenities may be granted by the San Francisco Redevelopment Agency Commission in accordance with the Redevelopment Plan to any use being developed within the YBC redevelopment area. The Redevelopment Plan bonus schedule is in Table 2 on page 10 of the Plan. The GSA site, although considered to be located on CB-1 for purposes of analysis, is outside the redevelopment area. Development on this site would be in accordance with the City Planning Code, as may be required.

3. VISUAL ASPECTS

The visual setting of the YBC area is described on pages 73 - 83 in the YBC FEIR. The view north toward CB-1 from Mission St. is dominated by the red brick facades of St. Patrick's Church and the Jessie St. Substation and by the cream-colored facade of the Mercantile Bldg. at the corner of Third St. (see Photo 2 on page 81 of the YBC FEIR); these buildings stand out from the surrounding temporary parking lots. Photo 3 on page 81 of the YBC FEIR shows the Mission St. view of St. Patrick's Church and the Jessie St. Substation. The building at the left in the foreground of Photo 5 is the Mercantile Bldg. The view from Third St. looking west toward CB-1 is one of asphalt parking lots and the Mercantile Bldg. The Market St. side of the portion of the redevelopment area within CB-1 is a parking lot, separated from Market St. by a tall wooden fence. Not on the site, but immediately to the west of this parking lot, is the Humboldt Bank Bldg., a tall building with a multi-colored dome that has been designated a City Landmark (see Section A-V.M., page 39). The view from CB-1 toward Market St. is pictured in Photo 6, page 81 of the YBC FEIR. Looking east toward CB-1 from Fourth St., the gray GSA Bldg. and a

large rubble-strewn, partially excavated lot are visible; beyond them is the side of St. Patrick's Church.

FOOTNOTES

- /1/ City Planning Code, 1979, Sec. 215(a).
- /2/ Ibid., Sec. 212(c).
- /3/ Ibid., Sec. 124.
- /4/ Ibid., Sec. 234.
- /5/ Ibid., Sec. 234.2.
- /6/ Ibid., Sec. 161
- /7/ Ibid., Sec. 204.5(c).
- /8/ Ibid., Sec. 270.

B. HOUSING AND BUSINESS RELOCATION

CB-1 contains St. Patrick's Church and Rectory, the partially occupied Mercantile Bldg., the vacant Jessie St. Substation, six active temporary parking lots, and the vacant GSA Bldg. There are no residences on the block, except the church rectory.

C. SOCIAL CHARACTERISTICS

There are currently no residences on CB-1, except the church rectory. The YBC area as a whole had approximately 800 persons living in it in 1977./1/ Whites made up the largest single group at 48%, followed by Asians (20%) and Blacks (18%). There were three large housing complexes for the elderly within YBC and the immediate vicinity. Approximately 95% of all the people residing in the YBC area in 1977 lived in these complexes, so it follows that between 90% and 95% of all area residents were over 62 years old. It is likely that the majority of persons living in the area have low incomes. The programs under which the complexes were built include income limitations. In 1979, after certification of the YBC FEIR, a new 112-unit subsidized housing development for the elderly, called Woolf House, was constructed on the southwest corner of Fourth and Howard Sts.; an additional 70 units are also proposed. Housing was discussed for this location in the YBC FEIR in Alternatives B and C.

Appendix C, page 21 of the YBC FEIR Appendices lists and describes all available social services for the South-of-Market area in July, 1977. Of the services listed, St. Patrick's Church is on CB-1.

The whole South-of-Market area is deficient in commercial services, restaurants, and grocery stores. Community groups have cited needs for: parks and open space, improved medical service, additional counselling services, community outreach programs, and child care facilities (YBC FEIR, page 96). Since the certification of the YBC FEIR, a subsidized cooperative food market has been opened in Woolf House at Fourth and Howard Sts. For further discussion of commercial services refer to Section V. C., pages 84 - 96 of the YBC FEIR.

FOOTNOTE

/1/ All demographic and social service data for this section are derived from studies done in the summer of 1977 for the YBC FEIR; descriptive material has been added for new information since 1977.

D. ECONOMICS

1. GENERAL ECONOMIC AND FISCAL SETTING

San Francisco's evolution into a regional financial, government, and service center with its changes in land uses and development patterns is presented in Section V.D. on page 97 of the YBC FEIR. Office space has continued to grow; nearly 10 million sq. ft. have been added since the 1975 study conducted by Arthur D. Little, Inc. and the Department of City Planning./1/

The annual reports of the San Francisco Convention and Visitors Bureau for the years 1977 through 1979 indicate that approximately 10 million out-of-town visitors (including convention delegates) remained overnight in hotels and motels during that three-year period. Approximately 28 million out-of-town visitors have stayed in San Francisco hotels and motels since 1969 for an average of nearly 2.8 million out-of-town visitors annually for this ten-year period.

In 1979, 3.5 million out-of-town visitors remained overnight in San Francisco hotels and motels, and spent an estimated \$1,054 million in the City, or approximately \$301 per visitor. In 1979, approximately 21% of all out-of-town visitors using hotel and motel facilities were convention delegates. In 1979, a total of about 743,000 convention delegates spent an estimated \$338 million in San Francisco, or approximately \$455 per delegate visit. This represents a decrease of 1.5% in the number of convention delegates since 1976, but an increase of 36% in the total amount spent by convention delegates since 1976. Approximately 60% of the total 1979 convention delegates (438,000) stayed in San Francisco hotels or motels; the remaining 40% either lived in the area or stayed with family or friends.

During the three-year period between 1977 and 1980, out-of-town visitors to San Francisco, excluding convention delegates, increased an average of 7% (compounded) per year. Non-convention visitor expenditures in San Francisco increased an average of approximately 18% (compounded) per year during this same period.

2. EMPLOYMENT AND FINANCING

Information on employment in the South-of-Market area and in YBC is contained in Section V.D. on pages 99 - 100 of the YBC FEIR, and on page 29 of the YBC FEIR Appendices. Information on the financing of Yerba Buena Center development is contained in the YBC FEIR on pages 100 -119.

Hotel Room Tax

One method of financing YBC development, the City hotel room tax, has changed since 1976. The tax rate of 6 cents per dollar of room rental increased to 8 cents in 1978 and then to 9.75 cents per dollars in 1980. The revised Ordinance (Ordinance No. 502-76) allocated up to 4 of the 6 cents to the Convention Center under Proposition S, a policy declaration approved by the voters in November 1976. On May 22, 1978 the Board of Supervisors approved Ordinance No. 251-78 which increased the hotel tax rate from 6 cents to 8 cents, effective June 30, 1978. Then, on June 30, 1980, Proposition O was approved by the voters, increasing the hotel tax rate to 9.75 cents; the

additional 1.75 cents per dollar were allocated to the City's General Fund. Hotel room tax allocations provided for in the 1976 and 1978 Ordinances are discussed in the YBC FEIR, pages 274 - 277.

As the hotel room tax ordinance now stands, the tax rate of 9.75% of hotel room rental revenues is allocated as follows: 41% for the construction and bond redemption of the George R. Moscone Convention Center; 5.1% for Candlestick Park Bond debts; 5.1% for financing low-income housing in the YBC area; (adjusting for the Proposition O surcharge and assuming the remaining amount will be distributed similarly to the 1979-80 fiscal year) about 15% for the Hotel Publicity and Advertising Fund; and, 33.8% to the City's General Fund.

FOOTNOTE

/1/ From the Five Fremont Center DEIR, EE 80.268, Table 3: Cumulative High-Rise Office Space Growth in San Francisco Since 1945, page 39.

E. COMMUNITY SERVICES

1. WATER

The CB-1 area is served by gravity flow from the 140-million-gallon capacity University Mound Reservoir, located in the Portola District north of McLaren Park. System details are illustrated in Appendix E, page 43 of the YBC FEIR Appendices. CB-1 is served by twelve-inch diameter mains under Mission, Market and Fourth Sts. and by a sixteen-inch diameter main under Third St.

2. SEWERS

The Bureau of Sanitary Engineering of the San Francisco Public Works Department provides a combined storm drain and sanitary-sewer service to the project area. Service would be available from 3 ft. by 5 ft. brick mains in Fourth, Mission and Third Sts. and from the North Point main, an 8-ft.

diameter concrete main located under Market St. adjacent to CB-1. System details appear in Appendix E, page 45 of the YBC FEIR Appendices.

The North Point Water Pollution Control Plant, which receives stormwater and sewage flows from the area, receives average daily dry-weather flows of 52 million gallons per day (MGD).^{/1/} City treatment plants are not designed to handle storm flow from rainfall greater than an average of 0.02 inches per hour; the excess flows bypass the plants and discharge directly into San Francisco Bay and the Pacific Ocean. Plans are currently being implemented to reduce these overflows and bring the City sewer system into compliance with Regional Water Quality Control Board requirements. Bayside dry-weather facilities (secondary treatment) are scheduled to begin interim operation in December, 1982. Dry-weather flows from the area would be treated at the Southeast Water Pollution Control Plant, which would treat average dry-weather flows of 85 MGD. Peak capacity at the Plant would be 140 MGD after expansion. The North Point Plant would be used to treat wet-weather flows until completion of the Citywide wet-weather system, possibly near the end of the decade, and at that point the North Point Plant would probably be closed.^{/2/}

3. ELECTRICITY, GAS AND STEAM

The Pacific Gas and Electric Company furnishes electricity, natural gas, and some steam power in the City of San Francisco. Electricity is provided to CB-1 from the 225 MVA (million volt ampere) - capacity Mission St. Substation. The natural gas distribution system and steam-generating plants are described in the YBC FEIR on page 122.

4. SOLID WASTE

The Golden Gate Disposal Company, a private firm, collects all solid wastes from CB-1. Disposal operations are described on pages 122 - 123 of the YBC FEIR.

5. COMMUNICATIONS

Telephone service is provided by Pacific Telephone and Telegraph Company.

6. POLICE

CB-1 is patrolled by San Francisco Police Department officers from the Southern Station at the Hall of Justice at 850 Bryant St. Squad cars cover the South-of-Market area as far south as 16th St. There are no foot patrols in the vicinity of CB-1 (YBC FEIR, page 124).

7. FIRE

Station Nos. 1, 8 and 13 of the San Francisco Fire Department serve the CB-1 area. One station is within two blocks of the site; this is Station No. 1 at 416 Jessie St. Response time is three minutes or less (YBC FEIR, page 126). Station No. 27 at 356 Seventh St. and Station No. 35 at 676 Howard St. were closed in 1980.

8. SCHOOLS

No school-age children are known to be living on CB-1.

9. PARKS AND RECREATION

There are no parks or mini parks in the immediate area.

10. MEDICAL

San Francisco General Hospital, approximately three miles from CB-1, is the nearest public hospital. City ambulance service response time from the hospital averages four to six minutes (YBC FEIR, page 127).

For further discussion of community services in the YBC area, refer to Section V. E., pages 120 - 129 of the YBC FEIR.

FOOTNOTES

/1/ R. Chin, Superintendent, North Point Water Pollution Control Plant, telephone communication, February 20, 1980.

/2/ D. Hayashi, Coordinator of Public Participation, San Francisco Clean Water Program, telephone communication, March 7, 1980, and D. Thompson, Public Clean Water Information Officer, telephone communication, August 7, 1980.

F. TRANSPORTATIONStreet System

Central Block 1 (CB-1) is the northernmost block in the YBC area, bordered by Market, Mission, Third and Fourth Sts. All four of the streets are Transit Arterial streets as defined in the Downtown Transportation Plan and Transit Streets as defined in the Mass Transit Plan of the Transportation Element of the San Francisco Comprehensive Plan./1/ Third, Fourth and Market Sts. are also defined as Major Thoroughfares in the Thoroughfares Plan./2/ For a more detailed description of the street system in the YBC area, refer to Section V.F. on pages 130 - 136 of the YBC FEIR.

Traffic Characteristics

Analysis of the p.m. peak-hour movements of pedestrians, automobiles, transit vehicles, trucks and other vehicles has been made to update (as necessary) information contained in Section V.F. of the YBC FEIR, pages 137 - 155.

Pedestrians. CB-1 is located in an area of intense pedestrian activity. Refer to page 137 of the YBC FEIR for a description of pedestrian activity in the YBC area.

Transit. CB-1 is served directly by both surface and subsurface Muni routes. Entrances to the Market St. Muni Metro and BART subway are located adjacent to CB-1. There are surface streetcar, motorcoach and trolley coach stops on Market St. near the frontage of CB-1. On the Third, Fourth and Mission St. frontages are Muni motorcoach and trolley coach stops.

Muni is currently carrying approximately 20,110 passengers outbound on 30 routes passing through downtown during the p.m. peak hour./3/ Refer to page 138 of the YBC FEIR for a description of additional transit services in the YBC area. The Richmond - Daly City line has been added to the BART system since the preparation of the YBC FEIR (1978).

Mixed Vehicles. Refer to page 145 of the YBC FEIR for a description of vehicular traffic volumes and speeds on the street system in the YBC area. Analysis of two intersections on the periphery of CB-1 has been updated to determine existing p.m. peak-hour conditions in the vicinity. Peak-hour turning-movement counts were made at the intersections of Fourth and Mission Sts. and Market and Stockton/Ellis/Fourth Sts./4/ See Appendix B, page 137, for a description of the method of capacity analysis and definition of the Levels of Service. Analysis of the count data indicates that the intersection of Fourth and Mission Sts. is currently operating at Level of Service D (volume/capacity (v/c) ratio 0.84), indicating poor traffic conditions. The intersection of Market and Stockton/Ellis/Fourth Sts. is operating at Level of Service A (v/c ratio 0.51) during the p.m. peak one-hour period; this indicates excellent traffic operations. (v/c = 0.91 - 1.00 for Level of Service E) The Level of Service at the latter intersection was recently improved by geometric design changes which increased its capacity. These service levels are based on hourly traffic volumes, consistent with recent practice in other planning studies of downtown San Francisco traffic; peak 15-minute volumes were used in the YBC FEIR.

Parking

Parking studies conducted for the YBC FEIR (see pages 155 - 156) for CB-1 are applicable to this Supplement as the existing uses on CB-1 are essentially unchanged from the earlier report. However, construction of the George R. Moscone Convention Center has removed the majority of the surface parking facilities in the YBC area. Analysis of one study shows daily parking occupancies in the parking spaces not removed by construction to be in the range of 80% to 90%.^{/5/} For off-street parking spaces a rule of thumb used by traffic engineers is that 85% occupancy represents "full" occupancy. The

remaining spaces are in the process of being - or about to be - occupied by arriving vehicles.

The site is within the Downtown Core automobile control area designated in the Transportation Plan for Downtown and Vicinity./6/ This area is described in the Plan as "that intensely populated area which functions as a financial, administrative, shopping and entertainment center where priority must be given to the efficient and pleasant movement of business clients, shoppers and visitors; where a continuing effort should be made to improve pedestrian, transit and service vehicle access and circulation; where priority for the use of limited street and parking space within this core should be available for these functions; and where a continuing effort should be made to reduce the impact of the private commuter vehicle."

The Revisions to the Transportation Element of the Master Plan Regarding Parking, confirm the statement in the Plan for Transportation (1972) that "all additions to the commuter load as a result in job growth in the City should be made by public transit." In accordance with this statement, objectives and policies guiding and limiting the provision of parking are outlined in the revisions to the Downtown Transportation Plan and Plan for Transportation.

FOOTNOTES

/1/ San Francisco City Planning Commission, Resolution 6834, April 27, 1972, Comprehensive Plan, Transportation Element, page 25.

/2/ Ibid., Thoroughfares Plan, page 23.

/3/ Source: San Francisco Municipal Railway schedule checks on various weekdays in 1979 and 1980.

/4/ Manual turning-movement counts made by TJKM, traffic engineers, on Monday and Tuesday, October 20 and 21, 1980, between 4:30 and 5:30 p.m.

/5/ City and County of San Francisco, Department of City Planning, Crocker Plaza FEIR, EE 78.298, 1979.

/6/ San Francisco City Planning Commission, Resolution 6834, April 27, 1972, Map A.

/7/ City Planning Commission Resolution 7647, January 20, 1977.

G. CLIMATE AND AIR QUALITY

San Francisco's air quality is, in general, the highest for all developed portions of the Bay Area. The City's predominantly westerly and northwesterly winds tend to carry pollutants to other parts of the Bay Area, chiefly east and south. Much of the City is generally upwind from major sources, such as industrial areas, airports, freeways, and other urban areas. Light-variable (calm) wind situations, which occur about 25% of the time on an annual basis, lead to stagnation in the airshed, most commonly in the fall and winter months. At such times, the potential exists for the entire Bay Area to experience high concentrations of pollutants. The San Francisco climate is described in detail in the YBC FEIR, pages 158 - 160.

Table C-1, Appendix C, page 138, is an air-pollutant summary for San Francisco, based on measurements taken from the Bay Area Air Quality Management District (BAAQMD) monitoring station at 939 Ellis St., less than one mile from CB-1. This station is located on the roof of a nine-story building, and so does not reflect street-level concentrations of pollutants. It is more accurately interpreted as an overview of regional background pollutants.

Over 90% of street-level carbon monoxide (CO) is emitted from vehicular sources. CO concentrations, therefore, can vary greatly from place to place within the City. Table 2 shows estimates of 1980 CO levels along Fourth and Mission Sts., fronting CB-1.

On a daily basis, the highest 8-hour-averaged CO concentrations occur between 4:00 p.m. and 2:00 a.m. An intense, but brief, maximum occurs from 7:00 to 9:00 a.m.; this is followed by reduced levels from 10:00 a.m. to 4:00 p.m. The greatest build-up of CO occurs in winter when the formation of low-level radiation inversions corresponds to the evening traffic peak hour (YBC FEIR, page 162). Information on concentrations of other pollutants and on air quality management is on pages 152 - 170 of the YBC FEIR.

TABLE 2: ESTIMATED 1980 WORST-CASE ROADSIDE CARBON MONOXIDE (CO) CONCENTRATIONS AT CB-1

<u>Street</u>	CO Concentration* in ppm**	
	<u>Evening Peak Hour</u>	<u>Highest 8-Hour Average</u>
Fourth St.	20.2	10.0***
Mission St.	23.2	10.7***

* Roadway-generated concentrations were added to ambient "background" concentrations. Background concentrations were assumed to be 14.4 ppm for one hour and 9.3 ppm for eight hours.

** ppm: parts per million

*** Exceeds the applicable standards: 35 ppm for one hour and 9 ppm for eight hours

SOURCE: Environmental Science Associates, Inc., using Bay Area Air Pollution Control District (BAAAPCD), 1975, Guidelines for Air Quality Impact Analysis of Projects, Information Bulletin, as updated by BAAQMD, 1978 and 1979 for changes in vehicle emission factors, and based on traffic data from TJKM.

H. NOISE

The Department of Public Works has developed noise zones for the City, using the noise descriptor levels L_{10} and L_{90} . These are statistical noise levels which represent environmental sound levels in dBA/1/ which are exceeded 10% and 90% of the time, respectively. L_{10} is useful in representing intrusive noise levels, and L_{90} in representing background noise levels. The Department of Public Works' data show that the YBC area, including CB-1, falls within the following zones (YBC FEIR, page 172)./2/

<u>Daytime</u>	<u>Nighttime</u>
L_{10} , 75 dBA	L_{10} , 70 dBA
L_{90} , 60 dBA	L_{90} , 60 dBA

In the Transportation Noise Element of the Comprehensive Plan (Department of City Planning, 1974), the Department of City Planning mapped the YBC area within a 24-hour-averaged background noise level (Ldn)/3/ zone of 65 dBA.

The City has established land-use compatibility criteria for community noise (San Francisco Department of City Planning, Transportation Noise Element of the Comprehensive Plan of San Francisco, August 1974). These criteria are given in Figure H-1, page 145 of the YBC FEIR Appendices.

FOOTNOTES

/1/ dBA: decibels measured on the A-weighted scale, which is sensitive to the frequency response of the typical human ear.

/2/ The noise maps are available for inspection at the Department of Public Works, Bureau of Engineering, 45 Hyde St., Room 222, San Francisco.

/3/ Ldn: an averaged sound level measurement based on human reaction to cumulative noise exposure over a 24-hour period. To account for greater annoyance, 10 dBA are added to measured noise levels between 10:00 p.m. and 7:00 a.m.

I. RESOURCE USE

1. ENERGY

Electricity and natural gas service is provided in the project area by Pacific Gas and Electric Company (PG&E). New demands for electricity in the PG&E service area of Northern California will be met primarily with nonrenewable energy resources including natural gas, coal and nuclear fuels. Among the major new power plants which are anticipated by PG&E are the Diablo Canyon nuclear power plant in San Luis Obispo County and the proposed Montezuma coal-fired power plant in Solano County. In response to a directive of the State Public Utilities Commission, PG&E will also be required to increase generating capacity from co-generation projects, which generate electricity in combination with industrial processes that already use fossil fuels as a source of heat. PG&E also anticipates the construction of additional geothermal plants and increased purchases of electricity from other utilities; this power would come primarily from hydroelectric and nuclear power plants in

Washington State. No new nuclear power plants not already under construction or in operation are planned in California./2/

PG&E has a steam supply system which extends past the CB-1 portion of the site to Howard St.; however, the existing system is effectively operating at capacity and is no longer accepting additional customers. Additional information may be found in Section V.I., pages 186 - 188 of the YBC FEIR.

2. WATER

The San Francisco Water Department, under the control of the San Francisco Public Utilities Commission, provides water to the City of San Francisco from the Hetch Hetchy reservoir system. Discussion of the Hetch Hetchy water system delivery capacity and storage capacity is in the YBC FEIR, pages 188 - 189.

Most of CB-1 is vacant or used for parking. The church, rectory, and Mercantile Bldg. retail uses together require approximately 606,000 gallons of water per year./1/ The GSA Bldg. and Jessie St. Substation are unoccupied.

FOOTNOTE

/1/ Calculation based on YBC FEIR, page 189, Table 28, and on YBC FEIR Appendices, Appendix A, Table A-1, page 1.

/2/ California Energy Commission, 1981, Status of Proposed Energy Projects; CEC, Sacramento, California.

J. GEOLOGY AND SEISMOLOGY

GEOLOGY

Bedrock lies buried beneath unconsolidated sands and Bay mud at the CB-1 site. The bedrock is Franciscan formation rock. For further information on topography and geological materials, refer to Section V. J., pages 191 - 198 of the YBC FEIR. Topography is shown in Figure 24 and Geology in Figure 25, pages 193 - 195 of the YBC FEIR.

SEISMOLOGY

No active faults are known to exist within the City of San Francisco. A small inactive fault is mapped on Rincon Hill to the southeast of CB-1. Several active fault zones which affect the area are: the San Andreas Fault, the Hayward Fault, and the Sunol-Calaveras Fault. Potential earthquake hazards on CB-1 include: groundshaking; liquefaction (the transformation of loose wet sand to a fluid state similar to quicksand) which would result in lateral landsliding and bearing capacity failure; and subsidence (sinking of the land surface due to the settling of compressible earth). The dune sand which covers the site has good stability, low compressibility, and thus a low potential for failure. The greatest danger would be from liquefaction if the water table were near the surface. CB-1 would be subject to "strong" groundshaking^{/1/}. Because of the geologic materials underlying CB-1, this block would experience the least potential hazard in the YBC area in a major earthquake. The effects of a major earthquake in the area would be confined to general cracking of masonry and brickwork. For further information on Seismology, refer to pages 192 - 206 of the YBC FEIR. Page 203 of the YBC FEIR contains a map of Areas of Potential Seismic Hazard.

FOOTNOTE

/1/ On a three-step scale consisting of: "violent groundshaking", "very strong groundshaking", and "strong groundshaking". From John A. Blume Associates, 1974, San Francisco Seismic Safety Investigation Geologic Evaluation.

K. HYDROLOGY

There are no water courses, springs or lakes in the CB-1 area. The area is low-lying, and under natural drainage would receive surface runoff from surrounding areas to the north and east. The groundwater table ranged from 8 to 13 feet below the surface in 1964. Storm runoff is discharged into the combined sanitary sewer and storm drain system. For further information, refer to Section V.K., pages 207 - 211 of the YBC FEIR.

L. ECOLOGY

Open areas on CB-1 are either paved or rubble-strewn. Wildlife under these conditions is substantially restricted. No rare or endangered plant or animal species was noted on the site. The area supports a Norway rat population which lives in the old sewer lines that were not removed when buildings were demolished. For further information on the ecology of the YBC area, refer to Section V.L., pages 210 - 211 of the YBC FEIR.

M. ARCHAEOLOGIC AND HISTORIC ASPECTS

For a discussion of archaeologic and historic aspects of the YBC area, refer to Section V.M., Archaeological and Historic Aspects, pages 212 - 218e of the YBC FEIR.

The Foundation for San Francisco's Architectural Heritage has conducted an architectural survey and resources inventory (The Foundation for San Francisco's Architectural Heritage, 1979, Splendid Survivors, San Francisco's Downtown Architectural Heritage), rating all downtown buildings constructed prior to 1945 from a low of "D" to a high of "A" (see Appendix E, page 141, for discussion of the rating system). Four buildings in CB-1 within the redevelopment area are rated in the Heritage Survey. Three of the buildings were listed in the 1976 Architectural Inventory by the San Francisco Department of City Planning, a citywide inventory of architecturally significant buildings. Buildings were rated on a scale from a high of "5" to a low of "0" (see Appendix E, page 141, for a discussion of the rating system).

St. Patrick's Church, on the north side of Mission St. between Third and Fourth Sts., the Mercantile Bldg. at the northwest corner of Mission and Third Sts. (700 Mission St.), and the Jessie St. Substation are rated "A" in the Heritage survey. In the Department of City Planning survey, St. Patrick's Church is rated "3" and the Mercantile Bldg. and Jessie St. Substation are rated "5". The St. Patrick's Rectory, adjacent to St. Patrick's Church on

Mission St. is rated "C" in the Heritage Survey and was not rated in the City Planning Survey.

In May, 1980, the San Francisco City Planning Commission published a Listing of Architecturally and/or Historically Significant Buildings in the Downtown to encourage preservation of structures of architectural or historic merit that are not designated landmarks. The Mercantile Bldg. (700 Mission St.) is the only structure in CB-1 within the redevelopment area included in the list. The Jessie St. Substation and St. Patrick's Church have already been designated landmarks, and thus were not considered for the list.

The General Services Administration (GSA) Bldg. at 49 Fourth St. is not within the redevelopment area, but is included in CB-1 in this Supplement. The 11-story steel-frame office loft, with five-story rear addition, was built in 1925. The structure has a three-part vertical composition and "vaguely Gothic ornamentation".¹ The GSA Bldg. is rated "B" in the Heritage Survey, but was not rated in the City Planning survey. It is included in the May 1980 City Planning Commission list. With the concurrence of the State Historic Preservation Officer (SHPO), the GSA Bldg. has been determined by the General Services Administration not to be eligible for listing on the National Register of Historic Places.²

Several structures on Assessor's Block 3706 adjacent to the YBC Market St. frontage of CB-1, but outside the Redevelopment Area, are rated in the Department of City Planning and Heritage Surveys. The Humboldt Bank Bldg., at 785 Market St., abuts the western edge of the YBC Market St. entrance. Under construction at the time of the 1906 earthquake and fire, the Humboldt Bank Bldg. was entirely destroyed. It was subsequently redesigned and rebuilt with a steel frame braced by lattice girders and cladding of sandstone at the base with terra cotta above. The building appears from the street as a domed tower with Renaissance/Baroque ornamentation. The design is adapted from the 1898 Call Bldg. (now the Central Tower at 703 Market St.).¹ The Humboldt Bank Bldg. is rated as "4" in the Department of City Planning Survey, and is rated "A" in the Heritage Survey. It is included in the May 1980 City Planning Commission list.

The Carroll and Tilton Bldg. at 735 Market St. and the Bancroft Bldg. at 725-31 Market St. are east of the YBC Market St. frontage. The structures were constructed in 1907 and 1908, respectively, and are both six stories with Renaissance/Baroque ornamentation and brick construction. Together with the Humboldt Bank Bldg., the buildings form a frame for the Market St. entrance to the YBC./1/ The structures are rated "0" in the City Planning survey, and "B" in the Heritage Survey. Both are included in the May 1980 City Planning Commission list.

The 721 Market St. Bldg. and the 715-719 Market St. Bldg. are east of the Bancroft Bldg. on Assessor's Block 3706 outside the Redevelopment Area. They were built in 1907 and 1906, respectively, and were both remodeled about 1940. Both buildings are rated "C" in the Heritage Survey, and 715 - 719 Market St. is rated "1" in the City Planning Survey. The building at 721 Market St. was not rated in the City Planning Survey. Neither structure is included in the May 1980 City Planning Commission list.

The Central Tower, formerly the Call Bldg., is located at the southwest corner of Third and Market Sts. (703 Market) on Assessor's Block 3706 outside the redevelopment area. The Central Tower was constructed in 1898, was damaged in the 1906 earthquake and fire, and was subsequently rebuilt. The original design was a domed tower; the building was considered one of the finest skyscrapers ever built in San Francisco./1/ Its form was imitated in many local designs; only one, the Humboldt Bank Bldg. at 785 Market St., was ever built. The Central Tower was remodeled in the late 1930's. The strength of the steel frame allowed the replacement of the dome with six office floors. The remodeled structure has the form of a Moderne, set-back tower. The Central Tower is rated "B" in the Heritage Survey and "1" in the Department of City Planning Survey. It is included in the May 1980 City Planning Commission list.

FOOTNOTES

/1/ The Foundation for San Francisco's Architectural Heritage, 1979, Splendid Survivors, San Francisco's Downtown Architectural Heritage.

/2/ Carl Blalock, Regional Historic Preservation Office, Public Buildings Service, General Services Administration, letter dated 12 January 1981.

A-VI. ENVIRONMENTAL IMPACTS (Central Block 1)

A. LAND USE, ZONING AND VISUAL ASPECTS

1. LAND USE

The proposed land uses for CB-1 would change the nature of most of the existing land uses from temporary parking lots and vacant or partially vacant buildings to a high-density activity center, including hotel rooms, office and retail-commercial space, a public pedestrian concourse and market-rate dwelling units.

The proposed mixed-use development on CB-1 would contain about 2,200 hotel rooms. In comparison, all of the YBC FEIR alternatives for CB-1 would be predominantly business uses, with the balance being retail-commercial uses (YBC FEIR Appendices, Appendix A, Table A-1, page 1). The proposed mixed-use development would be largely a mixture of retail, office, hotel and residential uses, whereas the YBC alternatives for CB-1 largely would be expanded Financial District uses. The mixed-use proposal would provide up to 500 high-rise market-rate dwelling units. Of the four YBC alternatives, Alternatives B and C would provide 100 and 200 market-rate dwelling units, respectively, for CB-1 (YBC FEIR Appendices, Appendix A, Table A-1, page 1). Alternatives A and D would provide no housing on CB-1. The hotel and housing uses proposed for CB-1 would attract tourist-serving and resident-serving commercial services to the block. Proximity to the Financial District and to public transportation would attract businesses.

Possible land use conflicts might result as the nighttime and weekend influx of visitors to the George R. Moscone Convention Center on CB-3 and to the recreation/entertainment park proposed on CB-2 in Alternative B would produce nighttime and weekend activity and noise near the proposed dwelling units. The severity of this conflict would depend on the location of the dwelling

units in relation to the pedestrian concourse, the recreation/entertainment park on CB-2, and tourist services.

2. ZONING

All of the proposed uses would conform with the permitted land uses for the block in the Official Redevelopment Plan for the Yerba Buena Center Approved Redevelopment Project (San Francisco Redevelopment Agency, reprinted September 1979). All of the uses proposed are permitted uses under the San Francisco City Planning Code (1979), for the C-3-R District. Construction of any of the proposed uses on the GSA site would require a rezoning of the site from P-Public to C-3-R (Downtown Retail). The P designation is generally reserved for areas occupied by governmental uses, with other public and community uses allowed by Conditional Use authorization.

Development on the parcels within the redevelopment area would be under the jurisdiction of the San Francisco Redevelopment Agency and would be reviewed by the Redevelopment Agency Commission. As the GSA site is outside the redevelopment area, development on that site would be required to comply with the provisions of the City Planning Code, including the interim controls enacted by the Board of Supervisors on May 27, 1980. Under the interim controls, Section 126 of the City Planning Code, governing specified floor area bonuses for certain design features, was suspended. Hotel and residential structures were exempted and may apply for floor area bonuses under Conditional Use authorization procedures.

3. VISUAL ASPECTS

The proposed mixed-use development of CB-1 would have a visual character similar to that of CB-1 under Alternative A, as described on pages 227 - 228 of the YBC FEIR. As in Alternative A, pedestrian-level uses generally would be retail-commercial. In the new proposal, the pedestrian concourse could be covered, rather than open as in Alternatives A, B and C. Structures containing predominantly office and retail-commercial uses would not exceed 280 ft. in height, except as a bonus for special undertakings by the developer elsewhere on the site; such height bonuses would be negotiated with the

Redevelopment Agency. Hotel and residential structures and structures receiving height bonuses could be as tall as 400 ft. The GSA Bldg. outside the redevelopment area would be demolished and replaced by new construction.

B. HOUSING AND BUSINESS RELOCATION

Table 32, page 241 of the YBC FEIR, contains a business relocation schedule for the entire YBC area for the years 1977-1980. No businesses or residences on CB-1 would require relocation.

Although the GSA site is included in CB-1 for this Supplement, it is not part of the YBC redevelopment area. The General Services Administration has not yet concluded negotiations with the San Francisco Redevelopment Agency for the property. Until such negotiations are concluded, the GSA is considering construction of a new federal office building on the 49 Fourth St. site. The proposed new federal office building is the subject of an Environmental Impact Statement (EIS) now being prepared. The Draft EIS is expected to be available in May of 1981. Other sites also being considered are at the northeast and southeast corners of the intersection of Mission and Third Sts., also within YBC. The existing GSA Bldg. at 49 Fourth St. site is presently vacant; employees to be moved to the contemplated new GSA building would be relocated from leased and federal space elsewhere in San Francisco.

C. SOCIAL CHARACTERISTICS

Table 33 on page 244 of the YBC FEIR indicates which support services will experience increased demand with increases in housing development. Housing proposed for CB-1 would consist of 500 market-rate units, and would thus require additional commercial services (stores, banks etc.), and recreational, religious, community, and cultural facilities. Most of the housing units would probably be tenanted by employed adults, with an average family size of two persons per unit (YBC FEIR, page 245). The increased demand for commercial services by this population could be a market stimulus and encourage development of local-serving establishments in the area. Guests at

the proposed hotel uses on CB-1 would also generate additional demand in YBC vicinity for retail uses, such as specialty shops, and for entertainment facilities.

D. ECONOMICS

1. GENERALIZED ECONOMIC IMPACTS

The overall economic impacts which would be experienced under any of the YBC alternatives, changes in the relative importance of the YBC vicinity and other existing centers of recreation and commerce, and income-oriented changes due to the completion of the proposed development are presented in Section VI.D., pages 248 - 252 of the YBC FEIR.

2. EMPLOYMENT

For comparison, employment estimates for CB-1 in 1988 under the four YBC alternatives range from a low of about 3,000 new permanent jobs under Alternative C to a high of about 7,900 new permanent jobs under Alternative A. These jobs represent nearly all new employment over the 1977 YBC work force of about 10 to 15 persons on the redevelopment area portion of CB-1. Table 3 shows gross new employment in CB-1 projected to 1988 by occupational category for each of the four YBC alternatives and the new mixed-use proposal. Office workers would comprise the largest component of the new employment generated under each alternative, representing a range of 58% to 96% of the new workers in 1988. The new mixed-use proposal would provide about 4,000 jobs; approximately 60% would be office workers and 40% would be hotel workers.

Based on a multiplier of 2.4, each new direct job in CB-1 would create 1.4 new indirect jobs in the Bay Area (see YBC FEIR, pages 251a - 251b). Using this estimate, the new mixed-use proposal, would result in about 5,640 indirect jobs, for a total of 9,670 direct and indirect new jobs. The number of new jobs created would range from about 18,960 under Alternative A to about 7,180 under

TABLE 3: PERMANENT ON-SITE EMPLOYMENT PROJECTIONS FOR CB-1 BY LAND-USE TYPE, 1988

<u>Use</u>	1988 YBC FEIR Alternatives				1988 New Mixed Use Proposal
	<u>Alt. A</u>	<u>Alt. B</u>	<u>Alt. C</u>	<u>Alt. D</u>	
Office	7,600	5,070	2,840	7,390	2,350
Retail	300	200	150	330	110
Hotel	0	0	0	0	1,570
Pedestrian Concourse	2	2	2	0	2
Total**	7,900	5,270	2,990	7,720	4,030

* Includes 700-room Arcon Pacific hotel and 1500 additional hotel rooms; the Arcon Pacific hotel was considered only as a variant use for CB-1 in YBC FEIR Alternatives A and B, so is not included in the columns for those Alternatives.

** Totals may not be directly derived from the columns above because of rounding.

SOURCE: YBC FEIR and Environmental Science Associates

Alternative C. Estimated employment from construction under the new mixed-use proposal would be about 2,900 person-years of labor, about 25% more than on CB-1 under Alternatives A or D. An average of approximately 1,450 full-time jobs would exist at any one time during the two-year construction period. Based on a construction-employment multiplier of 1.0 for indirect jobs, an estimated 1,450 indirect full-time, one-year jobs, in addition to the direct construction jobs, would be created each year of construction in the region by the construction on CB-1.

3. AREA FINANCING

The direct and indirect financial impacts of the development of the entire YBC are discussed on pages 258 - 274 of the YBC FEIR. A source of revenue which would accrue from the construction of hotel rooms on CB-1 would be the hotel room tax. Based on projected total annual room sale revenues of \$38.5 million

and an 80% occupancy rate/1/, the 700-room Arcon Pacific hotel and the proposed 1,500 additional hotel rooms would generate about \$3.76 million annually in total hotel tax revenues at the current tax rate of 9.75%. As specified by amended City Ordinance 251-78, approximately \$1.54 million (41%) of these hotel tax revenues would be allocated for the construction and bond redemption of the George R. Moscone Convention Center; \$192,000 (5.1%) for Candlestick Park Bond debts and \$192,000 (5.1%) for financing low-income housing in the YBC Redevelopment Area. Adjusting for the Proposition 0 surcharge and assuming the remaining amount would be distributed similarly to the 1979-80 fiscal year, about \$564,000 (15.0%) would be budgeted for the Hotel Publicity and Advertising Fund and about \$1.27 million (33.8%) would accrue to the City's General Fund.

4. PUBLIC SERVICE COSTS

The San Francisco Fire Department stated that no additional operating and capital costs would be required to serve full urban development in YBC. The San Francisco Police Department has indicated that an additional patrol car and two police officers would be required on a 24-hour basis to protect the area. According to the Deputy Chief of Police Administration, the Police Department is unable to provide an estimate of the cost of these additional services at this time./2/

As with the four YBC alternatives, a slight increase in general government administrative costs would be expected with the increased intensity of uses on the project block. Street-related costs, such as those for maintenance, storm drainage, lighting, and cleaning, would not be measurably affected. Water and sewer operating cost increases would be covered by user charges, and the San Francisco Water Department and Department of Public Works indicate that no additional project-related water or sewer capital costs would be required./3/

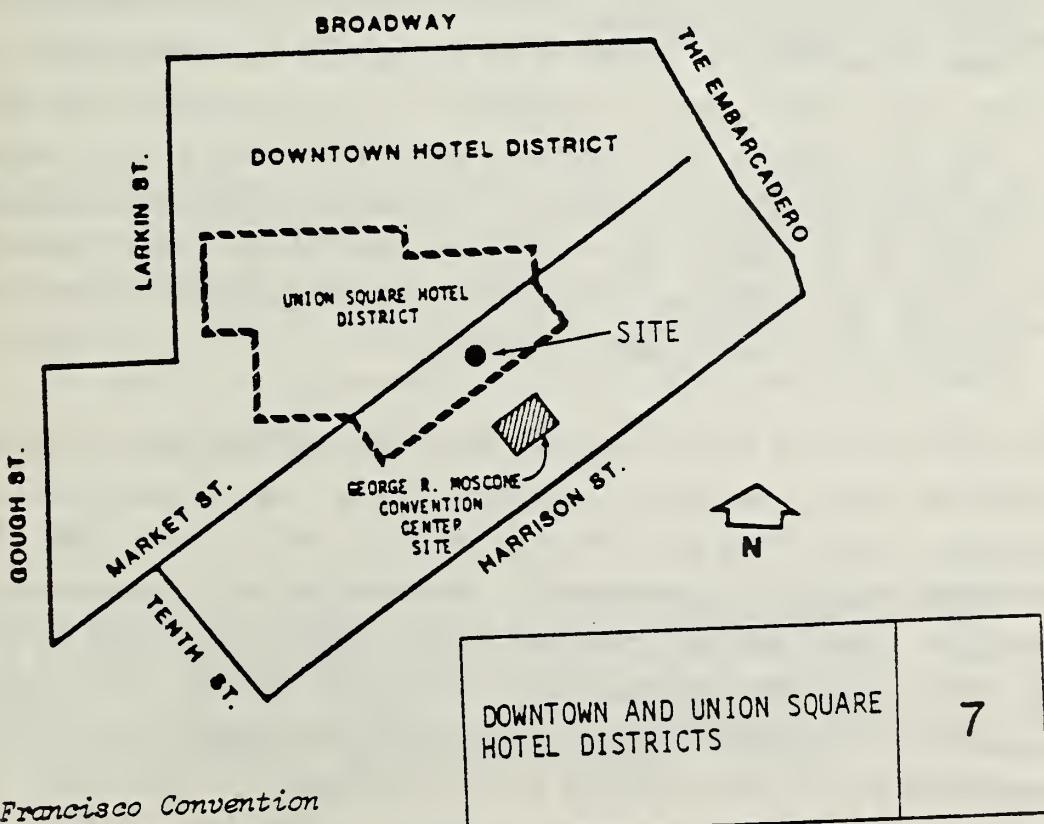
5. CUMULATIVE HOTEL DEVELOPMENT IMPACTS

In addition to the proposed 700-room Arcon Pacific hotel and the 1,500 additional hotel rooms in the new mixed-use proposal for CB-1, about 2,400 additional quality hotel rooms/4/ have been proposed for construction in

downtown San Francisco, for a total of 4,600 rooms. This represents an increase of about one-third over the current 14,700 quality hotel rooms in the downtown hotel district (see Figure 7) as defined by the San Francisco Convention and Visitors Bureau (the area generally bounded by Broadway, The Embarcadero, Harrison, Tenth, Market, Gough, California, and Larkin Sts.).

The proposed projects include the 1,000-room Hotel Ramada at the corner of Mason and Eddy Sts.; the 400-room addition to the existing Hilton Hotel and Tower at O'Farrell and Taylor Sts.; a 200-room addition to the existing Holiday Inn - Civic Center, located on 8th St. between Mission and Market Sts.; and the 800-room Holiday Inn proposed at Mason and O'Farrell Sts./5/

Besides these six hotel developments which have been proposed in the downtown area, a 500-room addition to the existing Sheraton Palace Hotel, located on Market between New Montgomery and Second Sts., is in the informal planning stages. A 400- to 800-room hotel is also under consideration at Folsom and



SOURCE: San Francisco Convention
and Visitors Bureau

Steuart Sts. in the Rincon Point - South Beach Redevelopment Project area (see Rincon Point - South Beach Redevelopment Plan Final EIR/S, EE 80.267, November 24, 1980, pages 23 - 24).

According to the San Francisco Convention and Visitors Bureau, there would be sufficient hotel room demand to absorb the approximately 5,900 hotel rooms currently proposed or being planned. This additional hotel-room demand would come from the following sources/6/:

George R. Moscone Convention Center. An estimated additional 2,700 to 3,500 rooms would be required by 1982 to meet the increased hotel room demand generated by the George R. Moscone Convention Center.

Increase in Foreign Tourists. Foreign tourists currently comprise about 25% of all San Francisco tourists. Foreign tourism is expected to increase, both in number and percentage of total tourism, because of the increased strength of foreign currency relative to the American dollar.

Recapture of Lost Business. Construction of a projected 5,900 new hotel rooms is expected to recapture hotel business currently being lost because not enough hotel rooms are available in San Francisco. The insufficient hotel room supply leads tourists, commercial travelers and convention participants, who would prefer to stay at San Francisco hotels, to choose either not to come to San Francisco or to stay at hotels located outside but near San Francisco, such as at the San Francisco International Airport, or in Burlingame or Oakland.

With the completion of the proposed six hotel projects containing about 4,600 hotel rooms, the annual occupancy rate in the Downtown Hotel District is expected to range from about 84% in 1981-82 to about 77% by 1985. These percentage occupancy rates represent an averaging of high occupancy rates during the summer and fall peak season when hotels are almost fully occupied with lower occupancy rates during the off-season period. This decline in occupancy would be attributable to increased room supply, not entirely compensated for by the recapture of lost business./6/ Room rates are expected to increase by 10% per year (as compared to 12% per year prior to 1982)

because of the increase in the number of hotel rooms. If even more hotel rooms were to be added to the San Francisco hotel room stock after 1985 and there were not a corresponding increase in hotel room demand, then hotel occupancy rates and annual increases in room rates would be expected to decline further.

Effects on the San Francisco Tourist Industry. New hotel construction in the downtown area would strengthen the tourist industry in San Francisco, especially for the convention tourist market. Construction of up to about 5,900 quality hotel rooms, coupled with the opening of the George R. Moscone Convention Center, is expected to increase the number of convention participants visiting San Francisco. The convention visitors make a substantial contribution to San Francisco income. According to 1979 figures provided by the San Francisco Convention and Visitors Bureau, convention participants spent 196% more per capita per visit (\$455) than per capita per visit expenditures (\$232) by other tourist or commercial travelers visiting San Francisco. These per-capita estimates are for all tourist or commercial travelers visiting San Francisco, and include hotel room and food and beverage sales. An increased ratio of convention-tourist business to other tourist business in San Francisco could be expected to generate higher tourist income to the City and County.

Cumulative Hotel Tax Contributions. Based on a 74% occupancy rate and an average daily room rate of \$60 (1980 dollars), the 2,200 hotel rooms in the mixed-use proposal for CB-1, and the proposed Hotel Ramada, Hilton Hotel Tower No. 2, Holiday Inn at O'Farrell and Mason Sts., and Holiday Inn Civic Center addition would generate an estimated \$7.3 million (1980 dollars) annually in additional hotel tax revenues at the rate of 9.75% of gross room rental sales.

FOOTNOTES

/1/ Projected annual room sale revenues and occupancy rates were based on an average daily room rate of \$60.00 (1980 dollars) and were derived from comparable existing and proposed hotels in the downtown vicinity. See City and County of San Francisco, EE 80.171, Hotel Ramada Final EIR, January 29, 1981; EE 79.283, Holiday Inn - Mason & O'Farrell Draft EIR, November 8, 1980; and EE 80.267, Rincon Point - South Beach Final EIR, November 24, 1980.

/2/ J. Shannon, Deputy Chief of Police, Administration, San Francisco Police Department, telephone communication, October 28, 1980.

/3/ J.E. Kenck, Manager, City Distribution Division, San Francisco Water Department, letter dated November 3, 1980, and M. Francies, San Francisco Clean Water Program, letter dated October 17, 1980.

/4/ There is no standard definition of quality hotel rooms in San Francisco. Various private automobile and travel associations, such as the American Automobile and the Mobil Travel Associations, rate the quality of San Francisco hotels, but each organization uses different criteria so that there is no uniform rating classification system. The San Francisco Convention and Visitors Bureau does not classify hotels. Conversations with D. Hess, Assistant Manager of the San Francisco Convention and Visitors Bureau, and with J. Wilkensen, a Financial Analyst at Laventhal and Horwath (a certified public accounting firm specializing in hotel developments), indicate that hotels containing quality hotel rooms in San Francisco generally have average single-room rates of at least \$50 (1980 dollars) and one or all of the following services and amenities: air conditioning, swimming pool / health club, 24-hour room service, a specialty restaurant, entertainment lounge, and free guest parking. So-called first-class and deluxe first-class hotels are considered quality hotels and would have most or all of the services and amenities mentioned above.

/5/ The Office of Environmental Review file numbers for the four additional hotels proposed for the Downtown Hotel District are: Hilton Hotel - EE 79.257; Holiday Inn / Mason and O'Farrell - EE 79.283; Holiday Inn Civic Center Addition - EE 79.314; and Hotel Ramada - EE 80.171. Conditional Use authorizations for the Hotel Ramada and Holiday Inn/Mason and O'Farrell were approved on January 29, 1981.

/4/ Laventhal and Horwath, 1 March 1979, Projected Hotel Tax Collections for San Francisco, prepared for Roger Boas, Chief Administrative Officer, City and County of San Francisco. This report is available for public review at the Department of City Planning, Office of Environmental Review.

E. COMMUNITY SERVICES

1. WATER

The proposed uses for Central Block 1 would require approximately 655,400 gallons of water per day./1/ This is almost twice the water requirement of YBC Alternative D for CB-1, which, in comparison, would average 330,400 gallons per day. (Alternative D would use more water than any of the other YBC alternatives.) The San Francisco Water Department has stated that it can supply the projected demand of the new proposed uses for CB-1./2/ The

water distribution system would not have to be modified to supply the amount of water required but, due to the age of the water mains in the area, the San Francisco Water Department "may not allow direct pumping". This restriction would require on-site reservoirs be constructed for the buildings proposed on CB-1 and pumping be done only from these reservoirs./2/

There are no water mains under Jessie St. on CB-1, so its abandonment would not affect water service. The Water Department anticipates no need to alter its operations in any way in order to serve the proposed uses for either CB-1 or (for worst-case comparison) the proposed uses for CB-1 plus YBC Alternative D build-out for the rest of YBC./2/

2. SEWERS AND SEWERAGE

The San Francisco Clean Water Program's Planning and Design Department anticipates no difficulty in handling the projected total daily average of about 631,000 gallons per day of wastewater from the proposed uses for CB-1. This would be about twice as much wastewater as would be generated by CB-1 under Alternative D uses. Alternative D would generate more wastewater from CB-1 than would any of the other YBC alternatives. The sewer system in the area is designed for flows from the five-year storm, and is therefore "more than adequate to accommodate dry-weather flow"./3/ New buildings would be served from existing sewers in Mission, Third, Fourth and Market Sts.

There are no records of flooding on CB-1 (Assessor's Block 3706) and no flooding problems are anticipated. Any excess water from a storm of greater intensity than the five-year storm would be flow from the site to the streets between the curbs./3/

A 15-inch diameter sewer under Jessie St. on CB-1 would have to be abandoned if the portion of Jessie St. in the block were to be vacated as proposed. The San Francisco Clean Water Program does not anticipate that this would present a problem, provided that alternate sewer service would be available to any buildings now using the Jessie St. sewer. Whether any buildings are currently using the sewer would have to be verified by a qualified plumber./3/ Sewer lines exist under all four streets bounding CB-1 (see YBC FEIR Appendices,

page 45). Should existing buildings require reconnection, this could be done at the same time that the new buildings are connected to these lines.

Total average daily sewage generation by the proposed uses for CB-1 /4/ is presented in Appendix A, page 135. It is assumed as a worst-case estimate that 100% of CB-1 water consumption, other than that used for irrigation of the pedestrian concourse landscaping, would be returned to the sewer system, and that hotels would be at 100% occupancy.

The planning department of the San Francisco Clean Water Program anticipates that treatment facilities would have the capacity to accommodate the additional dry-weather flow from the proposed uses for CB-1./3/ By 1988, the projected completion date for YBC, all dry-weather flows from YBC would receive secondary treatment at the expanded Southeast Water Pollution Control Plant, and the North Point Plant may have been converted to an interim wet-weather facility. The combined dry-weather flow of the proposed uses for CB-1 and of Alternative D for the rest of YBC (an estimated average daily 1,850,000 gal./day for the two combined/4/) would not exceed the planned treatment capacity./3/

3. ELECTRICITY AND GAS

The capacity to serve the demand for electrical power and natural gas under full urban development exists in the PG&E system statewide (YBC FEIR, p. 297). Specific plans for undergrounding of electric lines and expansions of the local PG&E system are discussed the YBC FEIR on pages 296 - 297. PG&E has the capacity to serve the new mixed-use proposal on CB-1 without system modifications./5/

4. SOLID WASTE

Solid waste generated by proposed uses for CB-1 would amount to an estimated 15,200 pounds per day./4/ This would represent about 0.4% of the projected 1990 City total (YBC FEIR, page 299). Development under Alternative A on CB-1, in comparison, would generate about 21,200 pounds of solid waste per day, or about 0.6% of the projected 1990 City total./6/ This amount, the most

produced by any of the four YBC alternatives, could be accommodated by the City (YBC FEIR, page 297). No new difficulties would thus be expected in solid-waste disposal for the new proposal.

5. COMMUNICATIONS

Pacific Telephone and Telegraph has stated that it would be able to provide service at any one of the levels required by the YBC alternatives (YBC FEIR, page 301). The proposed uses for CB-1 would probably require service comparable to that for CB-1 under Alternatives A and D. The YBC FEIR discusses the laying of underground cables in the YBC area on pages 300 - 301.

6. POLICE

Development of the proposed uses for CB-1 would probably increase the number of calls for police services to the area. CB-1 is adjacent to a high-crime area which runs approximately from Fourth St. to Eighth St. between Market and Howard Sts. CB-1 itself currently has the highest crime rate of any of the YBC blocks, and has a rate higher than the average for the South-of-Market area as a whole. CB-1 is patrolled by a two-person patrol car 24 hours a day. According to the Office of the Chief of Police, an additional patrol car manned by two police officers 24 hours a day would be required to serve CB-1, were the new proposal implemented./7/

7. FIRE

The fire protection requirements of each of the YBC alternatives can be met by the San Francisco Fire Department without any increase in staffing, equipment, or high-pressure lines (YBC FEIR, page 304). The current level of service has been described by the Fire Department as consistent with full urban development for the YBC area (YBC FEIR, page 304). The Fire Department would be able to serve development under the new proposal. Buildings on CB-1 would comply with San Francisco Building Code fire safety requirements.

8. SCHOOLS

Fewer than ten school-age children would be expected to live in the 500 market-rate dwelling units proposed for CB-1 (Basis: YBC FEIR, pages 307 - 308). Any students living on CB-1 could be accommodated by the schools under the jurisdiction of the San Francisco Unified School District.

9. PARKS AND RECREATION

No parks are planned for CB-1. Park formation within the redevelopment area under each of the YBC alternatives is discussed in the YBC FEIR, pages 309 - 311.

10. MEDICAL

Emergency services to CB-1 would continue to be provided by Mission Emergency at San Francisco General Hospital, 1001 Potrero Ave. A level of medical emergencies consistent with urban business uses could be expected for CB-1, and could be accommodated by the Hospital (YBC FEIR, page 311).

FOOTNOTES

/1/ Based on water consumption factors in Table I-1, Appendix I, page 147 of the YBC FEIR Appendices.

/2/ J.E. Kenck, Manager, City Distribution Division, San Francisco Water Department, letter dated November 3, 1980.

/3/ M. Francies, San Francisco Clean Water Program, letter dated October 17, 1980.

/4/ Based on data in Table A-1, Appendix A, page 1, and on Table E-2, Appendix E, page 49, both in the YBC FEIR Appendices.

/5/ R.H. Fohlen, Power Engineer, PG&E, telephone communication, April 13, 1981.

/6/ Calculation based on solid-waste generation factors in YBC FEIR Appendices, Appendix E, page 51.

/7/ Information in this section from J.P. Shannon, Deputy Chief of Police, Administration, letter dated October 22, 1980.

F. TRANSPORTATION

Discussion of the impacts of the new mixed-use proposal for CB-1 is made in comparison with the impacts of the four alternatives analyzed in the YBC FEIR. The analysis has been conducted for the 1988 time frame. The transportation impacts of the four alternatives are described in the YBC FEIR, Section VI.F., pages 315 - 355. The new mixed-use proposal would affect the nature of development only on CB-1; for comparison, therefore the analysis in this Supplement separates the effects of the four alternative proposals for CB-1 from those of the rest of the YBC area, except for the intersection analysis, which necessarily considers traffic volumes produced by the YBC area as a whole.

Travel Demand Analysis

A trip generation / assignment / distribution process/^{1/} similar to that used in the YBC FEIR has been used to determine the CB-1 travel demand under each YBC alternative and the new proposal. For the four YBC Alternatives A, B, C and D, the trip-generation factors shown in Table F-1, page 57 of the YBC FEIR Appendices, the distribution percentages shown in Tables F-2 to F-13, pages 61 - 83 of the YBC FEIR Appendices, and the assignment percentages in Table F-14, page 84 of the YBC FEIR Appendices, have been used for all of the proposed land uses. For the new proposal, the YBC FEIR data have been used for the non-hotel uses in CB-1. For the hotel uses, the trip generation data were taken from two recent hotel studies; factors of 2.4 vehicle trip ends (vte)/^{2/} at the periphery of the site per occupied room and 2.9 total vte per occupied room (includes trips with origins and destinations exterior to the immediate site periphery)/^{3/} were used./^{4/} A total person-trip-end (pte) generation/^{5/} rate of 9.6 pte per occupied room was used from the same source. The hotel rooms were assumed to be 100% occupied, for worst-case transportation analysis.

Total Travel

Table 4 shows the comparison of total travel generated from CB-1 by each of the four alternatives and the new proposal.

TABLE 4: CB-1 TRAVEL PROJECTIONS FOR 1988 - Total Person Trip Ends

<u>TIME</u>	<u>NEW MIXED-USE PROPOSAL</u>	A	<u>ALTERNATIVES</u>		
			B	C	D
Weekday (24 Hour)	33,990	29,400	20,280	13,220	29,190
Weekday Peak Hour (4:30 to 5:30 p.m.)	3,220	3,710	2,550	1,590	3,650

SOURCE: TJKM, using YBC FEIR methodology.

The new proposal would generate more travel for CB-1 than would any of the four YBC alternatives on a daily basis. During the peak hour of traffic on adjacent streets (4:30 to 5:30 p.m.), the new proposal would generate less travel than Alternatives A or D, but more than Alternatives B or C. The hotel uses in the new proposal would cause the difference in total travel primarily by generating a proportionately greater number of pedestrian trips from CB-1 than would the uses proposed in Alternatives A, B, C or D. The hotel travel would be distributed more evenly throughout the day than would the other uses. Office and retail-commercial uses generate traffic that is concentrated at peak hours when workers commute to and from home. Hotel guests and employees exhibit a lower percentage of travel during the peak hour from 4:30 to 5:30 p.m.

Transportation Modes

Pedestrians. The pedestrian traffic on the sidewalks of Mission, Third, Fourth, and Market Sts. around CB-1 would consist of through-trips not related to CB-1 uses, and trips having one or both ends at a use on CB-1. Trips in the latter category are shown in Table 5.

Because of greater trip generation (in person trip ends) by the proposed hotels, 24-hour pedestrian trips generated by CB-1 uses under the new proposal would exceed the totals generated by CB-1 under each of the four YBC alternatives. Due to the lower p.m. peak-hour percentage of daily trips which

TABLE 5: CB-1 TRAVEL PROJECTIONS FOR 1988 - Pedestrian Trip Ends

<u>TIME</u>	<u>NEW MIXED-USE PROPOSAL</u>	<u>ALTERNATIVES</u>			<u>D</u>
		<u>A</u>	<u>B</u>	<u>C</u>	
Weekdays (24 Hour)	18,600	14,600	10,100	6,600	14,500
Weekday Peak Hour (4:30 to 5:30 p.m.)	1,750	1,850	1,250	800	1,800

SOURCE: Environmental Science Associates, using YBC FEIR methodology.

characterizes hotels as compared to the other proposed uses, the total number of peak-hour pedestrian trips under the new proposal would be less than that of Alternatives A and D (see Figures 31 and 34 of the YBC FEIR, pages 319 and 325), more than those of Alternatives B or C (see Figures 32 and 33 of the YBC FEIR, pages 321 and 323). A greater proportion of the pedestrian trips would occur at the noon hour under the new proposal than would occur at that time under any of the four YBC alternatives; this would be due to the hotel uses. About half of the pedestrian trips would be directed toward transit stops on Market St., which carries BART lines and many Muni lines. In the new mixed-use proposal, as well as YBC Alternatives A, B and C, pedestrian trips would be divided between Third and Fourth Sts. and the proposed pedestrian concourse.

Vehicular Travel. Table 6 shows the comparison of vehicular travel, expressed in vehicle trip ends (vte), generated by each of the four YBC alternatives and the new proposal for CB-1. The new proposal would generate more vehicular travel than would Alternatives A, B, C or D on a daily (24 hour) basis. On a peak-hour basis, the new proposal would generate less vehicular travel than would Alternative A or D, because the mix of uses in the new proposal would have a lower peak-hour percentage of average daily traffic than would the alternative uses. That is, the new proposal uses would generate more total daily vehicular travel than would any of the four alternatives, but would have reduced peaking characteristics during the p.m. peak hour of vehicular

TABLE 6: CB-1 TRAVEL PROJECTIONS FOR 1988 - Vehicle Trip Ends

<u>TIME</u>	<u>NEW MIXED-USE PROPOSAL</u>	<u>ALTERNATIVES</u>			<u>D</u>
		<u>A</u>	<u>B</u>	<u>C</u>	
Weekday (24 Hour)	11,020	10,590	7,300	4,760	10,510
Weekday Peak Hour (4:30 to 5:30 p.m.)	1,060	1,340	920	570	1,310

SOURCE: TJKM, using YBC FEIR methodology.

travel. The new proposal would generate more peak-hour vehicular travel than would Alternatives B or C.

Transit Travel. Table 7 compares daily and peak-hour generation of Muni trips from CB-1 for the four YBC alternatives and the new proposal. On both a daily and a peak-hour basis, the new proposal would generate fewer Muni trips than would Alternatives A, B or D, but more trips than would Alternative C.

TABLE 7: CB-1 MUNI TRAVEL PROJECTIONS FOR 1988 - Person Trip Ends

<u>TIME</u>	<u>NEW MIXED-USE PROPOSAL</u>	<u>ALTERNATIVES</u>			<u>D</u>
		<u>A</u>	<u>B</u>	<u>C</u>	
Weekday (24 Hour)	5,480	9,610	6,630	4,320	9,540
Weekday Peak Hour (4:30 to 5:30 p.m.)	800	1,210	830	520	1,190

SOURCE: TJKM, using YBC FEIR methodology.

The differences in transit travel demand are the result of the hotel uses on CB-1 in the new proposal. The hotel employees would be expected to use the Muni to commute to and from CB-1, but the hotel guests would not be expected to make much use of the Muni system, with the exception of the cable car

routes (particularly the Powell St. lines). Hotel guests would use the Muni primarily during off-peak hours (outside of the commute hours), while hotel employees would use the Muni during peak hours.

Regional Vehicle Miles of Travel

An analysis of the regional vehicular travel from CB-1 for the four YBC alternatives and the new proposal has been conducted in a manner similar to that used in the YBC FEIR (see pages 337 - 337A). Table 8 shows the results of the analysis. The new proposal would generate fewer regional vehicle miles of travel than would either Alternatives A or D, but more than would Alternatives B or C. The hotel uses would have a trip-distribution pattern different from the other uses proposed for CB-1, resulting in a shorter average trip length under the new proposal.

TABLE 8: CB-1 1988 REGIONAL VEHICLE TRAVEL - Vehicle Miles of Travel

<u>TIME</u>	<u>NEW MIXED-USE PROPOSAL</u>	<u>ALTERNATIVES</u>			<u>D</u>
		<u>A</u>	<u>B</u>	<u>C</u>	
Weekday (24 hour)	90,330	98,680	68,070	44,380	97,980
Average trip length (miles)	8.2	9.3	9.3	9.3	9.3

SOURCE: TJKM, using YBC FEIR methodology.

Parking and Circulation

Parking on CB-1 would be provided at the rates allowed by the City Planning Code. This would be a maximum of 7% of gross floor area for the hotel, office and retail-commercial uses, and a minimum of one space for every four market-rate dwelling units. The exact number of parking spaces to be built would depend on the actual hotel/office/retail-commercial floor area and the number of dwelling units constructed. For purposes of analysis it was assumed

that approximately 90 spaces would be allowed for the Arcon-Pacific hotel, accessible from midblock on Third St. It was also assumed that about 435 spaces would be allowed for the other uses on CB-1 under the new proposal/6/; these spaces would be accessible from midblock on Fourth St. and from Mission St. west of St. Patrick's Church. The exact locations of access to parking facilities have been assumed for purposes of analysis and may be subject to change during plan development.

The amount of parking proposed on CB-1 under the new proposal would be more than would be added under YBC Alternatives A, B, C or D; it would be less than the amount of temporary parking currently on the block. Table 9 shows the existing parking supply on CB-1, and that expected under the new proposal and each of the YBC alternatives. The impact on Third and Fourth Sts. from the access points to the garage areas would primarily affect pedestrian flows. The potential for vehicle - pedestrian conflicts as a result of vehicles crossing the sidewalks at the garage - access curb cuts would be similar to that under Alternatives A and D. Traffic flows on the two streets would not be disrupted by the garage traffic, because the two streets are one-way streets and turning movements across opposing lanes of traffic would not occur. A Mission St. garage access has the potential for increasing vehicle - vehicle conflicts, as well as increasing the potential for vehicle - pedestrian conflicts. Traffic making a left turn to exit or enter Mission St. would potentially increase the vehicle conflicts on the street and could disrupt the traffic flow. Queued vehicles waiting to turn left into the garage could overflow into the intersection of Fourth and Mission Sts., disrupting operation of the intersection.

The generally one-way grid pattern of streets in the CB-1 area would require additional vehicle miles of travel to allow vehicles to enter the garages on CB-1, since internal circulation on the block is limited. Consequently, closure of the portion of Jessie St. on CB-1 might also cause an increase in travel in the vicinity. As Jessie St. serves off-street loading areas in the existing buildings, closure of Jessie St. without adequate replacement of the loading areas could cause an increase in the number of service vehicles double parking along the frontages of CB-1, with accompanying effects on traffic flows.

TABLE 9: CB-1 PARKING SUPPLY - Parking Spaces

<u>EXISTING (TEMPORARY)</u>	<u>NEW MIXED-USE PROPOSAL</u>	<u>ALTERNATIVES</u>			
		A	B	C	D
661	525	516	361	267	417

* Computed as discussed on page 87 of the YBC FEIR Appendices

SOURCE: TJKM, using YBC FEIR methodology.

Objective 1, Policy 4, of the Plan for Transportation in the Revisions to the Transportation Element Regarding Parking, states "Discourage the addition of new long-term parking spaces in and around Downtown, limit the amount of new spaces to that which cannot be reasonably accommodated by transit and locate long-term facilities in areas peripheral to the Downtown Commercial District". The project site is within the Downtown Core as mapped (Map A) in the revised Downtown Transportation Plan. Provision of off-street parking for proposed uses on CB-1 would not be in compliance with the revised Downtown Transportation Plan. Parking on the site would be permitted under the Redevelopment Plan.

Intersection Analysis

The intersection of Market St. with Stockton/Ellis/Fourth Sts. and the intersection of Mission and Fourth Sts. have been analyzed, considering the traffic generated by the entire YBC Redevelopment Area, including CB-1, for each of the four YBC alternatives and for the new proposal, with projected baseline traffic taken into account. For the new proposal on CB-1, trip-generation by the rest of YBC was estimated as the average which would result from a mix of Alternative A and B uses (this reflects the November 1977 Tentative Proposal, the proposal evaluated in the YBC FEIR that most closely resembles the current Redevelopment Plan). Table 10 shows the volume-to-capacity ratios and Level of Service for each of the development possibilities considered.

TABLE 10: 1988 VOLUME-TO-CAPACITY (v/c) RATIOS AT INTERSECTIONS AT CB-1,
ASSUMING FULL DEVELOPMENT OF YBC - P.M. Peak Hour

<u>INTERSECTION</u>	<u>NEW</u>		<u>A</u>	<u>ALTERNATIVES</u>			<u>D</u>
	<u>1988 BASE</u>	<u>MIXED-USE PROPOSAL</u>		<u>B</u>	<u>C</u>	<u>D</u>	
Market/Fourth	<u>V/C LOS*</u>	<u>V/C LOS*</u>	0.54 A	0.62 A	0.64 A	0.59 A	0.57 A
Mission/Fourth	0.87 D	0.91 E	0.91 E	0.90 D	0.88 D	0.96 E	0.63 A

* LOS - Level of Service; Level of Service "E" occurs when v/c is in the range 0.91-1.00.

SOURCE: TJKM, using YBC FEIR methodology.

The 1988 base conditions are projected based upon the 1980 counts and assuming growth at 1% per year as explained in Appendix B, page 137. For comparison, volume-to-capacity ratios at both intersections resulting from traffic generated by the new mixed-use proposal would be equal to or less than those resulting from development of CB-1 under Alternatives A or D./7/

FOOTNOTE

/1/ This process: determines how many total trips per day would be made to and from the site; assigns percentages of these total trips to various directions and to various roads serving the site; and distributes percentages of the total trips over various modes of travel, such as pedestrian trips, transit trips and vehicular trips.

/2/ A trip end is a one-way trip, or one leg of a round trip.

/3/ Vte "at the periphery of the site" denotes those vehicle trips actually entering or leaving the site itself. "Total" vte includes vehicle trips associated with the site, but which use parking lots nearby.

/4/ City and County of San Francisco, Department of City Planning, Hotel Ramada San Francisco FEIR, EE 80.171, 1981; City and County of San Francisco, Department of City Planning, Tower No. 2 San Francisco Hilton Hotel DEIR, EE 79.257, 1980.

/5/ "Total person-trip-end generation" is the total number of trip ends made by people to and from the site, including all directions and all modes of travel.

/6/ The number of parking spaces was calculated as follows: 125 parking spaces for 500 dwelling units (1 space for each four units); 110 spaces for 555,000 gross sq. ft. of new office and retail-commercial floor area (7% of gross floor area at 350 sq. ft. per parking space); 200 spaces for the 1500 additional hotel rooms (7% of an estimated 999,000 gross sq. ft. of floor area at 350 sq. ft. per space; and 90 spaces for the 700-room Arcon Pacific hotel (7% of an estimated 465,000 gross sq. ft. of floor area at 350 sq. ft. per space). The last calculation yields 93 spaces; this was rounded to 90.

/7/ A mitigation measure in the Pacific III EIR (EE 80.315), certified February 26, 1981, suggests the removal of a traffic lane on Fourth St. for part of the block between Market and Mission Sts. to accommodate a widened sidewalk. As long as the westernmost lane on Fourth St., which contains a bus stop and functions as a right-curb lane, is not removed near Mission St., the Levels of Service shown for the intersection of Mission St. and Fourth St. would be as shown in Table 10.

G. CLIMATE AND AIR QUALITY

1. CHANGES IN LOCAL CLIMATE

Changes in local climatic patterns in the YBC area due to development under the four YBC alternatives are discussed in Section VI.G. on pages 356 - 357b of the YBC FEIR.

Because the sun generally shines from the south and west, seldom from the east (due to frequent morning fog), and never directly from the north (see YBC FEIR, page 357a), areas immediately to the north and east of high-rises on CB-1 would be shadowed to some extent by CB-1 buildings most of the year.

Central Block 2 would contain a pedestrian concourse plus high-rise structures in YBC Alternative A; a pedestrian concourse plus recreation/entertainment park in Alternative B; a public park in Alternative C; and high-rise structures in Alternative D. Studies were done showing the effect on CB-2 of shadows from development on CB-1, assuming for worst-case analysis/1/ that a 400-ft.-high building would be situated at the corner of Fourth and Mission Sts. Shadows cast by a 400-ft. building located at Fourth and Mission Sts. would remain north of Mission St. at all times of the day during the late summer, fall, winter and early spring. Because CB-2 is south and east of CB-1, CB-2 would be shadowed on afternoons in the early summer, when

the sun's path is high enough in the sky to cast long shadows to the southeast at sunset.

During the weeks near the summer solstice (June 22), shadows from the hypothetical building would start to move southeastward shortly after noon. At approximately 1:00 p.m. they would cross Mission St. and by about 4:00 pm. they would cover a 200-ft.-wide strip of CB-2 at ground level along Mission St. (the length of this strip along Mission St. would depend on the length of the CB-1 building's frontage on Mission St.). At about 6:00 p.m., the shadow from the hypothetical building on CB-1 would stretch across CB-2 at ground level to Howard St. in a diagonal strip running from the corner of Fourth and Mission Sts. to the corner of Third and Howard Sts. The corner of Fourth and Howard Sts. would remain free of shadows from buildings on CB-1 at all times of the day and all seasons of the year. The corner of Third and Mission Sts. would be shadowed near the time of the summer solstice, were buildings over 100 ft. tall to be built along Mission St. east of St. Patrick's Church.

A hypothetical building 200 ft. in height on CB-1 at Mission and Fourth St. would cast shadows about one-half as long as those of the hypothetical 400-ft. building. The same 200-ft. building set back from Mission St. to the GSA site would cast afternoon shadows near the time of the summer solstice that would not cross Mission St. until about 6:00 p.m. Were no tall buildings (200 ft. or higher) built along Mission and Fourth Sts., shadow impacts on CB-2 during late spring and early summer afternoons would be confined to a narrow strip along Mission St.

2. CONSTRUCTION EFFECTS

Earthmoving, construction activities, and particularly excavation for new foundations would affect local air quality by creating suspended particulate (dust). In contrast to gaseous pollutants and to small-size particulates from combustion, a large percentage of the particulates from construction settles out of the atmosphere rapidly with increasing distance from the source and generally does not penetrate to the lungs. It has been estimated that the fraction of small-sized construction particulate (less than 30 microns in

diameter), which may remain suspended indefinitely and is a health hazard, is generated at the rate of 1.2 tons per acre per month of activity (U.S. Environmental Protection Agency (U.S. EPA), August 1977, Compilation of Air Pollutant Emission Factors, AP-42, Third Edition). This would include emissions from excavation and earthmoving, traffic on unpaved surfaces, wind erosion and construction of structures. Levels of construction activity and their impacts are discussed in the YBC FEIR, pages 357c - 359.

The use of asphalt for road paving (for curb cuts) would generate hydrocarbon emissions. Regulation 8, Rule 15 of the BAAQMD prohibits the use of: rapid-cure cutback asphalt; any cutback asphalt during April through October, except when the temperature is below 50 degrees; and, after January 1, 1982, emulsified asphalt containing petroleum solvents in excess of 3% by volume.

3. LONG-TERM OPERATION EFFECTS

Long-term air quality impacts would result primarily from increased vehicular emissions. Stationary source emissions (from combustion of fuels for space and water heating) could be expected to range approximately from 1% to 20% of the mobile source emissions./2/ Table 11 shows daily emissions of five pollutants from all vehicular traffic generated by the new mixed-use proposal in CB-1 in the year 1988. Daily emissions of these pollutants from traffic generated by the CB-1 components of each of the four YBC alternatives in 1988 are presented for comparison. The proposed project for CB-1 would generate more daily vehicle trips than would any of the four YBC alternatives for CB-1, but, because a large proportion of CB-1 in the new proposal would be hotel uses, the average vehicle trip length would be shorter than that for any of the alternatives (see Section A-VI.F., p. 56). Thus, although the proposed project would produce more local trip ends than would any of the four YBC alternatives, its contribution to regional pollutants would be less than those of Alternatives A and D (the two YBC alternatives expected to generate the most traffic).

Table 12 shows worst-case (poor dispersion) carbon monoxide (CO) concentrations in parts per million (ppm) along Mission and Fourth Sts. produced by the local vehicular traffic in each of four cases: the existing

TABLE 11: CB-1 PROJECTED VEHICULAR POLLUTANT EMISSIONS

<u>Year</u>	<u>Use</u>	<u>Pollutant Emissions*</u> in Tons/Day				
		<u>CO</u>	<u>HC</u>	<u>NOx</u>	<u>SOx</u>	<u>TSP</u>
1988	YBC Alternatives:					
	A	2.880	0.299	0.191	0.026	0.036
	B	1.986	0.206	0.132	0.018	0.025
	C	1.295	0.134	0.086	0.017	0.016
	D	2.859	0.297	0.190	0.026	0.036
1988	Mixed-Use Proposal	2.651	0.275	0.175	0.024	0.033
1988	Projected Regional Emissions	2,795.	662.	574.	361.	159.

* Emissions of carbon monoxide (CO), hydrocarbons (HC), and nitrogen oxides (NOx) include an assumed three minutes of idle time per trip. Idle emission factors are not available for oxides of sulfur (SOx) or total suspended particulates (TSP).

SOURCE: Environmental Science Associates, Inc., using BAAQMD, 1979, EMFAC-5 Vehicular Emission Factors and traffic data from TJKM Associates. 1988 Bay Area Projections are from Association of Bay Area Governments (ABAG), Bay Area Air Quality Management District (BAAQMD), Metropolitan Transportation Commission (MTC), January 1979, 1979 Bay Area Air Quality Plan.

condition (1980); the 1988 base case (without YBC development); development in 1988 of CB-1 under YBC Alternative A, which would produce more traffic than any of the other YBC alternatives; and development of CB-1 in 1988 under the new mixed-use proposal (as in the Traffic analysis, emissions from the rest of YBC were estimated as those generated by the levels of traffic that would result from a mix of Alternative A and B uses, reflecting the November 1977 Tentative Proposal). The 1988 base case CO concentrations would be lower than existing concentrations due to the projected effects of government-mandated vehicular-emissions controls (BAAQMD, 1979, EMFAC-5 Vehicular Emission

TABLE 12: PROJECTED WORST-CASE (POOR DISPERSION) ROADSIDE CO CONCENTRATIONS*
(ppm)** AT CB-1

<u>Street</u>	<u>Averaging Time</u>	1980 Existing	1988 Base Case	1988 YBC Alt. A	1988 Mixed Use Proposal	Percent Change***
Fourth St.	1-hour	20.2	11.5	12.0	12.0	+ 4.3
	8-hour	10.0****	5.9	6.1	6.1	+ 3.4
Mission St.	1-hour	23.2	13.0	13.0	13.0	+ 0.0
	8-hour	10.7****	6.3	6.3	6.3	+ 0.0

* Roadway-generated concentrations were added to "background" concentrations. Background concentrations were assumed to be 14.4 ppm for one hour, and 8.3 ppm for 8 hours in 1980; 8.4 ppm for one hour and 5.0 ppm for 8 hours in 1988.

** ppm: parts per million

*** Percent change in CO concentration of project case over that of the 1988 base case.

**** Exceeds the applicable standards: 35 ppm for one hour and 9 ppm for 8 hours.

SOURCE: Environmental Science Associates, Inc., using Bay Area Air Pollution Control District (BAAAPCD), 1975, Guidelines for Air Quality Impact Analysis of Project, Information Bulletin, and based on traffic data from TJKM.

Factors). The local traffic generated by the new proposal plus YBC traffic generated outside CB-1 would produce CO levels along Fourth and Mission Sts. that would not exceed the levels produced by traffic generated under YBC Alternatives A and D. In all cases local CO levels in 1988 would be lower than they are now because of vehicle emissions controls, previously discussed. The greatest project-induced increase over CO concentrations in the 1988 base case would be about 4.3% on Fourth St. during the peak one hour. Neither federal nor state standards for CO would be exceeded due to project implementation. The maximum 8-hour CO concentration would not be expected to be more than 70% of the standard.

Subregional CO and particulate emissions have occasionally exceeded standards in the last three years (see Table C-1, Appendix C, page 138). The 1979 Bay Area Air Quality Plan (BAAQMD, ABAG, MTC) states that ozone pollution will

continue to be a regional problem in the future, that CO and particulate will continue to be problems on a local scale, and that certain pollution control strategies would be necessary to attain and maintain the standards for these pollutants as required by law. The mixed-use proposal would not be expected to have a measurable impact on citywide or regional air-pollution concentrations, or on the frequency of violations, and thus would not directly conflict with these strategies. The proposal would, however, generate additional pollutant emissions within San Francisco.

FOOTNOTE

/1/ A building situated here would cast a shadow whose entire length would fall on CB-2 more often than a shadow from a building situated anywhere else on CB-1.

/2/ Should fuel oil, rather than natural gas, be burned for heating, sulfur oxide (SO_x) and total suspended particulates (TSP) emissions could equal or be greater than mobile source emissions for the same pollutant, depending on the sulfur content of the fuel used.

H. NOISE

1. CONSTRUCTION NOISE

Construction activities would temporarily increase noise levels near construction sites on CB-1. The range of construction noise and its varying contributing factors are discussed on pages 394 - 395 of the YBC FEIR.

Table 13 shows average noise levels expected during construction.

San Francisco Noise Ordinance 274-72, "Regulation of Noise," Section 2907, adopted in 1973, requires that all powered construction equipment, except impact tools, not emit more than 80 dBA measured at 100 feet.

2. LONG-TERM NOISE IMPACTS AND LAND USE COMPATIBILITY

Local street traffic noise would continue to be the dominant noise source at CB-1, with or without development of the new mixed-use alternative. Noise levels along two streets which would be fronted by CB-1 buildings were calculated, and are shown in Table 14. Four cases were considered: the 1980

TABLE 13: TYPICAL COMMERCIAL/INDUSTRIAL CONSTRUCTION NOISE LEVELS AT 50 FEET

<u>Construction Phase</u>	<u>Average Noise Level*</u>
Ground Clearing	84 dBA
Excavation	89
Foundations	78
Erection	85
Finishing	89

* These noise levels would be reduced to comply with the Noise Ordinance by the implementation of the mitigation measures in the YBC FEIR (see pages 490 - 491)

SOURCE: Bolt, Beranek, and Newman, December 31, 1971, Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances, U.S. Environmental Protection Agency, page 20.

existing condition; the 1988 base case (without development of YBC); the 1988 YBC Alternative A (for comparison), which of all the YBC alternatives would produce the most traffic at CB-1; and the 1988 mixed-use proposal case, which assumes full build-out of the new proposal for CB-1 (as in the Traffic analysis, traffic-generated noise from the rest of YBC was estimated as that generated under a mix of Alternative A and B uses, reflecting the November 1977 Tentative Proposal).

In all cases noise levels along Fourth St. would be greater than noise levels along Mission St. The reduction in noise levels from lower average traffic volumes on Fourth St. is negated by the greater noise produced by traffic traveling at higher speeds.

The greatest increase in average noise levels along either street due to the new proposal would be about 1 dBA, a difference undetectable by the human ear. In comparison, normal day-to-day noise level fluctuations of 1 to 4 dBA would occur in the YBC area without any of the levels of development considered (YBC FEIR, page 172).

TABLE 14: CB-1 STREET-LEVEL TRAFFIC NOISE*, dBA**

<u>Street</u>	<u>Noise-Level Descriptor</u>	<u>1980 Existing</u>	<u>1988 Base Case</u>	<u>1988 YBC Alt. A</u>	<u>1988 Mixed-Use Proposal</u>
Fourth St.	Peak hour L _{eq} ***	63	63	64	64
	Estimated Ldn****	65	65	66	66
Mission St.	Peak hour L _{eq}	59	60	60	60
	Estimated Ldn	63	63	63	63

* Includes an assumed 4% truck and bus traffic, based on TJKM traffic counts for YBC FEIR.

** dBA: decibels measured on the A-weighted scale, which is sensitive to the frequency response of the typical human ear.

*** The equivalent steady-state sound level which in a stated period of time would contain the same acoustic energy as the time-varying sound level during the same time period.

**** Ldn: an averaged sound level measurement based on human reaction to cumulative noise exposure over a 24-hour period. To account for greater annoyance at night, 10 dBA are added to measured noise levels between 10:00 p.m. and 7:00 a.m.

SOURCE: Environmental Science Associates, Inc., using U.S. Department of Transportation, FHWA Highway Traffic Noise Prediction Model, 1978, FHWA-RD-77-108, and based on traffic data from TJKM.

San Francisco land-use compatibility criteria for community noise (S.F. Department of City Planning, 1974, as shown in Figure H-1, page 145 of the YBC FEIR Appendices) indicate that noise insulation features may be required for some of the proposed CB-1 buildings. The State of California (California Administrative Code Title 25, Chapter 1, Subchapter 1, Article 4) requires that the interior CNEL/1/ for newly constructed dwelling units and hotels with windows closed be less than or equal to 45 dBA. The State requires that an acoustical analysis be done, showing that the proposed building has been designed to limit noise to 45 dBA inside habitable rooms with windows closed. The City requires that this analysis be submitted to the Superintendent of Building Inspection with the application for a site permit. Two to three stories above street level, however, traffic noise would be approximately half that of the noise at street level. At a height of five stories, dwelling units and hotel rooms fronting streets would probably be compatible with the

local noise levels and not require special noise insulation. Both office buildings and retail-commercial uses (restaurants, stores) would be compatible with 24-hour averaged noise environments (Ldn) of up to 70 dBA.

FOOTNOTE

/1/ CNEL: the Community Noise Equivalent Level, which is similar to Ldn except that sound level measurements taken between 7:00 p.m. and 10:00 p.m. are weighted 5 dBA higher than daytime sounds, in addition to the 10 dBA 10:00 p.m. to 7:00 a.m. weighting. In practice, CNEL and Ldn rarely differ by more than 2 dBA.

I. RESOURCE USE

1. ENERGY

The projected annual operating energy demands for CB-1 under the new proposal would be higher than for development on CB-1 under any of the four alternatives considered in the YBC FEIR. These demands would be more than twice the demands for CB-1 as compared with Alternative A, the YBC alternative with the highest energy demand for CB-1. The increased energy demand would be due to the residential and hotel uses on CB-1. These types of uses require more energy for cooking, food preservation, and domestic hot water than do office and retail-commercial structures. Further, residential structures, including hotels, are heated during the cooler evening and early morning hours, while office and retail-commercial structures generally are not. Finally, current California Energy Commission standards for residential structures require only that the structural components of residential structures meet certain standards, while Energy Commission standards for non-residential structures require that nonresidential structures not use more than a specified amount of energy per sq. ft. of floor area per year./1/ Nothing in the standards for either residential or non-residential buildings requires any use of renewable energy resources.

The new mixed-use proposal would be expected to have annual electric and natural gas demand curves of a shape similar to those shown in Section IV.I. of the YBC FEIR, pages 413 and 417. Expected daily electric and natural gas

consumption curves would be of a shape similar to those for Alternative B (pages 415 and 419 of the YBC FEIR). However, because the energy use for the new proposal would be higher than for any of the alternative uses shown in the YBC FEIR, the value on the left-hand margin of the electric and natural gas consumption graphs would be greater than those shown for Alternative B in the YBC FEIR.

2. WATER

Projected total average daily water demand, broken down by use, is shown for the new proposal on CB-1 in Table 15./2/ It is assumed for worst-case analysis that the hotels would be at 100% occupancy. The hotels would require about two-thirds of all the water used by CB-1 after build-out.

In comparison, YBC FEIR Alternative D uses for CB-1, which would have the greatest build-out of the YBC FEIR alternatives, would require a total average of 330,400 gallons of water per day./2/ The new proposed uses for CB-1 would require about twice as much water as would Alternative D uses on CB-1. The San Francisco Water Department would be able to provide the projected water requirements of the proposed CB-1 uses without any alterations in the water distribution system./3/ The Water Department also foresees no difficulties in supplying all of YBC, should it be developed with the proposed uses for CB-1, and YBC FEIR Alternative D uses for the rest of YBC./3/

FOOTNOTES

/1/ There is an exemption from this per sq. ft. requirement; non-residential structures may comply with current regulations by demonstrating that 60% of the total energy used would come from renewable resources. New performance standards for residential structures were proposed by Energy Commission staff in November 1980.

/2/ Based on water consumption factors in Table I-1, Appendix I, page 147 in YBC FEIR Appendices.

/3/ J.E. Kenck, Manager, San Francisco Water Department City Distribution Division, letter, November 3, 1980.

TABLE 15: AVERAGE 1988 DAILY WATER DEMAND BY THE MIXED-USE PROPOSAL ON CB-1

<u>Use</u>	<u>Water Consumption (gal/day)</u>
1,500 Hotel Rooms (at 100% occupancy)	300,000
700-Room Arcon Pacific Hotel (at 100% occupancy)	140,000
500,000 Sq. Ft. of Office Space*	62,500
80,000 Sq. Ft. of Retail-Commercial Space*	16,000
Mercantile Building (existing, when fully occupied)	12,000
St. Patrick's Church (existing)	600
Pedestrian Concourse	24,300
500 Market-Rate Dwelling Units	<u>100,000</u>
TOTAL	655,400

* Consumption includes the Jessie St. Substation to be renovated.

J. GEOLOGY-SEISMOLOGY

The dune sand underlying CB-1, although having low compressibility, is unconsolidated (loose geologic material), and has a potential for liquefaction. The sands would make a poor foundation base for a high-rise office building or hotel, so some other means of stabilizing the buildings would probably be necessary. Pilings driven into the Franciscan Formation bedrock below the sands are the usual foundation base for high-rise buildings in the area. Lateral movement of unconsolidated geologic materials during excavation could force sands and bay mud into the pit. Use of some support system such as soldier beams and lagging, a common construction practice, would alleviate the hazard.

The YBC FEIR, pages 433 - 434, discusses potential damages to neighboring buildings due to dewatering during construction. Similar to development under the four YBC alternatives, the greatest potential earthquake hazard in the proposed CB-1 mixed-use development would arise from the probable shower of glass and other debris from building facades. High-rise buildings that front on streets or the pedestrian concourse would be classified as Risk Level 2 structures in the Community Safety Plan. The guidelines of Policy 1 of the

plan state that, "Failure of mechanical or architectural elements ... should not cause loss of life." (Community Safety Element, San Francisco Department of City Planning, 1974, page 41). Falling debris from CB-1 facades might pose such a hazard to people on the streets below (YBC FEIR, page 439).

K. HYDROLOGY

Construction on CB-1 would require excavation and dewatering similar to construction under the four YBC alternatives. Groundwater pumped during dewatering operations would be channeled into the local sewer lines, and could cause some clogging if the water were to contain a large quantity of silt. Dewatering would not have a permanent impact on local groundwater levels.

The CB-1 site presently has very little permeable soil surface. Building construction, therefore, would not increase rainwater runoff. Runoff would continue to drain into the storm and sewer system, and the streets surrounding the site would continue to have the potential hazard of stormwater overflows. New buildings with deeply laid foundations might have a seepage problem. Underdrain sump systems would be required for such structures (YBC FEIR, pages 438 - 440).

L. ECOLOGY

Landscaping after the proposed construction on CB-1 might include trees or shrubbery along the pedestrian concourse through the center of the block, and along the frontages of CB-1 with city streets. The hotel and housing developments might include some small open areas. As with the four YBC alternatives, most of the plants included in any landscaping would probably be non-native species. Animals under these conditions would be restricted to insects; to birds tolerant of the urban setting, including the domestic pigeon, house finch, English sparrow, and Brewer's blackbird; and to common soil animals. Rat control efforts would be needed temporarily during construction, were the abandoned sewer line in Stevenson St. to be exposed.

M. ARCHAEOLOGIC AND HISTORIC ASPECTS

The impacts of development within the YBC area on archaeologic and historic resources are discussed in Section VI.M., pages 444 - 445 of the YBC FEIR.

Under the new mixed-use proposal for CB-1, the GSA (Apparel Center) Bldg. at 49 Fourth St. would be demolished. The structure is not a City landmark and is not eligible for listing on the National Register; it is rated "B" by the Heritage Survey and is included in the City Planning Commission's Listing of Architecturally and/or Historically Significant Buildings in the Downtown.

As in the four YBC alternatives, the structures located on CB-1 within the redevelopment area (St. Patrick's Church and Rectory, the Mercantile Bldg. and the Jessie St. Substation) would be preserved for adaptive reuse. New construction on CB-1 would be undertaken within the context of the architecturally important buildings existing on Assessor's Block 3706.

A-VII. MITIGATION MEASURES (Central Block 1)

This section is organized in the same sequence as the Setting and Impact sections, with the same letter designating each impact category as in those sections. All mitigation measures identified in the YBC FEIR that would pertain to the uses proposed in this Supplement for development on CB-1 are summarized at the beginning of each subsection and incorporated here by reference (pages 447 - 509 of the YBC FEIR). Additional proposed mitigation measures are listed following the summary. Impact categories for which no YBC FEIR measures are applicable and no additional measures are suggested are omitted from the sequence. The proposed mitigation measures would be acted upon by the Redevelopment Agency Commission just prior to approval by the Commission of the land disposition agreement for CB-1.

A. LAND USE, ZONING AND VISUAL ASPECTS

APPLICABLE YBC FEIR MEASURES

The Redevelopment Agency would require the allocation of 1% of construction costs to public fine art works.

PROPOSED ADDITIONAL MEASURES

The principles and design standards developed for CB-1 by the Redevelopment Agency's urban design consultants would include consideration of the effect of building design and layout on the visual context of existing buildings of identified architectural or historic merit on Assessor's Block 3706, both inside and outside of the redevelopment area (see pages 447 - 448 of the YBC FEIR).

The Redevelopment Agency and HUD are consulting with the State Historic Preservation Officer and Advisory Council on Historic Preservation, regarding a Memorandum of Agreement relating to Historic Buildings.

C. SOCIAL CHARACTERISTICS

APPLICABLE YBC FEIR MEASURES

The addition of dwelling units would mitigate the loss of population that occurred in the South-of-Market district during the 1960's (see YBC FEIR, page 92).

The YBC area is populated now almost entirely by low-income elderly people. The introduction of market-rate housing would broaden the population mix of the area by adding mostly a non-elderly population.

E. COMMUNITY SERVICES

APPLICABLE YBC FEIR MEASURES

The Redevelopment Agency would require that all developers install low-flow toilets, urinals, taps and showerheads to reduce total liquid wastes discharged into the sewers.

Discharge of dewatering wastes from construction sites must conform to the Industrial Waste Ordinance.

The Redevelopment Agency would require that all refuse be placed in metal dumpster containers to facilitate pick-up.

The Redevelopment Agency would require installation of bicycle racks near office building entrances for use by messengers.

The designation of yellow-curb delivery zones to alleviate delivery vehicle conflicts with traffic near office and commercial buildings would be the responsibility of the Traffic Survey Unit of the San Francisco Police Department.

All construction sites must be fenced under the Federal Occupational Health and Safety Administration Regulations.

The Redevelopment Agency would recommend security systems or bonded security guards for all office buildings, retail-commercial establishments, and housing. Installation would be the responsibility of the developer.

PROPOSED ADDITIONAL MEASURES

Before requesting that Jessie St. be vacated, the Redevelopment Agency would hire a qualified plumber to determine whether any existing buildings are connected to the sewer under Jessie St. Should Jessie St. be vacated and the sewer abandoned, any buildings that are currently connected would be reconnected to the mains in Fourth St. or Mission St. at the expense of the developer or the Redevelopment Agency.

On-site water reservoirs would be provided on CB-1, if the Water Department prohibits "direct pumping" because of the age of the water mains in the area.

F. TRANSPORTATION

APPLICABLE YBC FEIR MEASURES

The pedestrian concourse proposed as part of the project would increase capacity for pedestrian movements between Market St. and the Convention Center on CB-3.

The YBC FEIR suggests that haul trucks for spoils and construction materials not be permitted on Mission St. or Market St., that trucks be directed to and from the James Lick Freeway via Third and Fourth Sts., and that they be

restricted from all streets during the a.m. and p.m. peak periods. Implementation would be the responsibility of the Department of Public Works and the Police Department.

PROPOSED ADDITIONAL MEASURES

Parking and Circulation

The potential for vehicle - vehicle conflicts from the proposed garage access on Mission St. would be reduced by restricting access to the entrance to right turn in and out only. The implementation of this measure would be under the jurisdiction of the Department of Public Works.

Were the CB-1 garage to have no entrance or exit on Mission St., but rather to have equal access to all parking spaces from both Third and Fourth Sts., the impact on the traffic on Mission St. would be reduced. If no internal circulation were provided in the block, the spaces would have to be distributed as 260 spaces with access onto Third St. and 265 spaces with access onto Fourth St. to allow Level of Service D operation of the intersection of Mission and Fourth Sts. The location of and access points to garages would be determined by the Redevelopment Agency during review of specific building proposals for CB-1.

The Redevelopment Agency would prepare a Transportation Management Plan to address vehicular traffic circulation and automobile parking.

The Redevelopment Agency would consult with the Department of City Planning and the Bureau of Traffic Engineering in designing the pedestrian access, vehicular access (including taxi and tour- and charter-bus loading areas), and off-street loading facilities of the hotel uses proposed for CB-1.

Intersection Capacity

Mitigation of the Level of Service E condition at the intersection of Mission and Fourth Sts. under the new proposal would require re-striping of the intersection to one left-turn lane, one left-and-through-optional lane and the

diamond lane westbound on Mission St. With this change, the volume-to-capacity ratio during the p.m. peak hour for the new proposal condition would be 0.89 (Level of Service D). The implementation of this measure would be under the jurisdiction of the Department of Public Works.

G. CLIMATE AND AIR QUALITY

APPLICABLE YBC FEIR MEASURES

Building height, shape, bulk, width, orientation, surface treatment and location with respect to other structures can all affect winds and shadows. The Redevelopment Agency would require developers of high-rise structures to conduct a microclimate analysis, including wind-tunnel studies, to determine impacts on pedestrian comfort and to provide a basis for design modifications to mitigate these impacts.

The reduction of dust generated by excavation and other construction activities would be achieved by using construction-industry-accepted methods such as watering the site and covering load material in trucks.

HUD would require one or more specific measures to reduce indoor levels of pollutant exposure. Possible requirements include:

- Housing units be at the second level or higher.
- Recirculation-type ventilation system and central forced-air heating system.
- Electric ranges in lieu of gas ranges.
- Emission vents of structures separated from air intakes by at least 15 feet.
- Air intakes elevated at least 10 feet above street level.
- Avoidance of long linear blocks of structures.
- No direct access to dwelling units from parking areas through a common doorway.

HUD would require mitigations of exterior air quality as follows:

- Avoidance of grading that creates low-lying areas.
- No active outdoor areas such as play areas, tennis courts and swimming pools.

Air quality impacts would be reduced through implementation of transportation mitigation measures in A-VII.F.

PROPOSED ADDITIONAL MEASURES

The tallest elements of new construction on western CB-1 would be set back from Mission St., wherever feasible, to reduce shading of the proposed open areas on CB-2.

H. NOISE

APPLICABLE YBC FEIR MEASURES

The San Francisco Noise Ordinance requires that powered construction equipment, other than impact tools and equipment, regardless of age or date of acquisition, emit no more than 80 dBA when measured at a distance of 100 feet, or an equivalent sound level at some other convenient distance. Impact tools and equipment must have intake and exhaust mufflers recommended by the manufacturers and approved by the Director of Public Works as best accomplishing maximum noise attenuation. The San Francisco Noise Ordinance requires a special permit for construction between 8:00 p.m. and 7:00 a.m.

The YBC FEIR recommends the following post-construction site planning noise mitigations:

- Setting back housing from the major streets.
- Orient housing away from noise sources, with courtyard and balcony areas screened from the noise by the building.

- Using noise barriers such as walls.
- Placing bedrooms as far as possible from exterior noise sources.

PROPOSED ADDITIONAL MEASURES

California Noise-Insulation Standards (Title 25, Chapter 1, Subchapter 1, Article 4, of the California Administrative Code) require that noise levels in any habitable room of a dwelling not exceed a 24-hour averaged level (CNEL) of 45 dBA with windows closed. Since 24-hour averaged traffic noise levels (L_{dn}) along Mission and Fourth Sts. would be in the range of 60 to 66 dBA, site-planning mitigation measures alone (as described on pages 494 - 494a of the YBC FEIR) may be sufficient to comply with the requirement.

Building-design mitigation measures could contribute to further noise reduction. Table 16 shows some typical noise reductions.

TABLE 16: NOISE REDUCTION ACHIEVED BY STRUCTURE EXTERIOR WALLS

<u>Building Type</u>	<u>Window Condition</u>	<u>Reduction of Noise From Outside Sources</u>
All	Open	10 dBA
Light Frame	Ordinary sash, closed	20 dBA
Masonry	Single pane, closed	25 dBA
Masonry	Double pane, closed	35 dBA

SOURCE: FHWA Policy and Procedure Memorandum 90-2, February 8, 1973.

California noise insulation standards would apply only to the proposed dwelling units and hotel rooms. Office buildings and retail-commercial uses are less sensitive to noise. Conformance with San Francisco's Transportation Noise Element of the Comprehensive Plan (1974) would not require any special noise insulation features.

I. RESOURCE USE

APPLICABLE YBC FEIR MEASURES

The Redevelopment Agency would encourage the use of a total energy system for development on the CB-1 site. Because several major structures would be designed and built in the same block at about the same time, an exceptional opportunity exists to incorporate a total energy system into the design (see Section VII. I., YBC FEIR, pages 498 - 499).

PROPOSED ADDITIONAL MEASURES

The San Francisco Redevelopment Agency would develop design criteria for CB-1 to preclude development from significantly shading other YBC building sites or sites outside the redevelopment area. The Agency would review each building design proposal to ensure that it would conform to these criteria.

The Redevelopment Agency would develop criteria for use in the design of each development to minimize the avoidable, unnecessary and/or wasteful use of nonrenewable energy and to encourage the use of renewable energy. The Agency would review each building design to ensure that it would conform to all criteria. See Appendix D, page 139, for a sample list of such criteria.

J. GEOLOGY AND SEISMOLOGY

APPLICABLE YBC FEIR MEASURES

Buildings would be designed in conformance with the San Francisco Building Code, Article 23, Sections 2314 A to K, to withstand damage resulting from maximum probable earthquake.

A soils engineer would be retained to make recommendations for building foundation design, as required by the Seismic Safety Element of the San Francisco Comprehensive Plan.

All buildings would be designed and positioned in conformity with the policies of the San Francisco community Safety Plan.

L. ECOLOGY

APPLICABLE YBC FEIR MEASURES

The Redevelopment Agency would use vegetation native to Northern California for landscaping, if available.

PROPOSED ADDITIONAL MEASURES

Rat control efforts would be needed temporarily during construction, were the abandoned sewer line in Stevenson St. to be exposed.

M. ARCHAEOLOGICAL AND HISTORIC ASPECTS

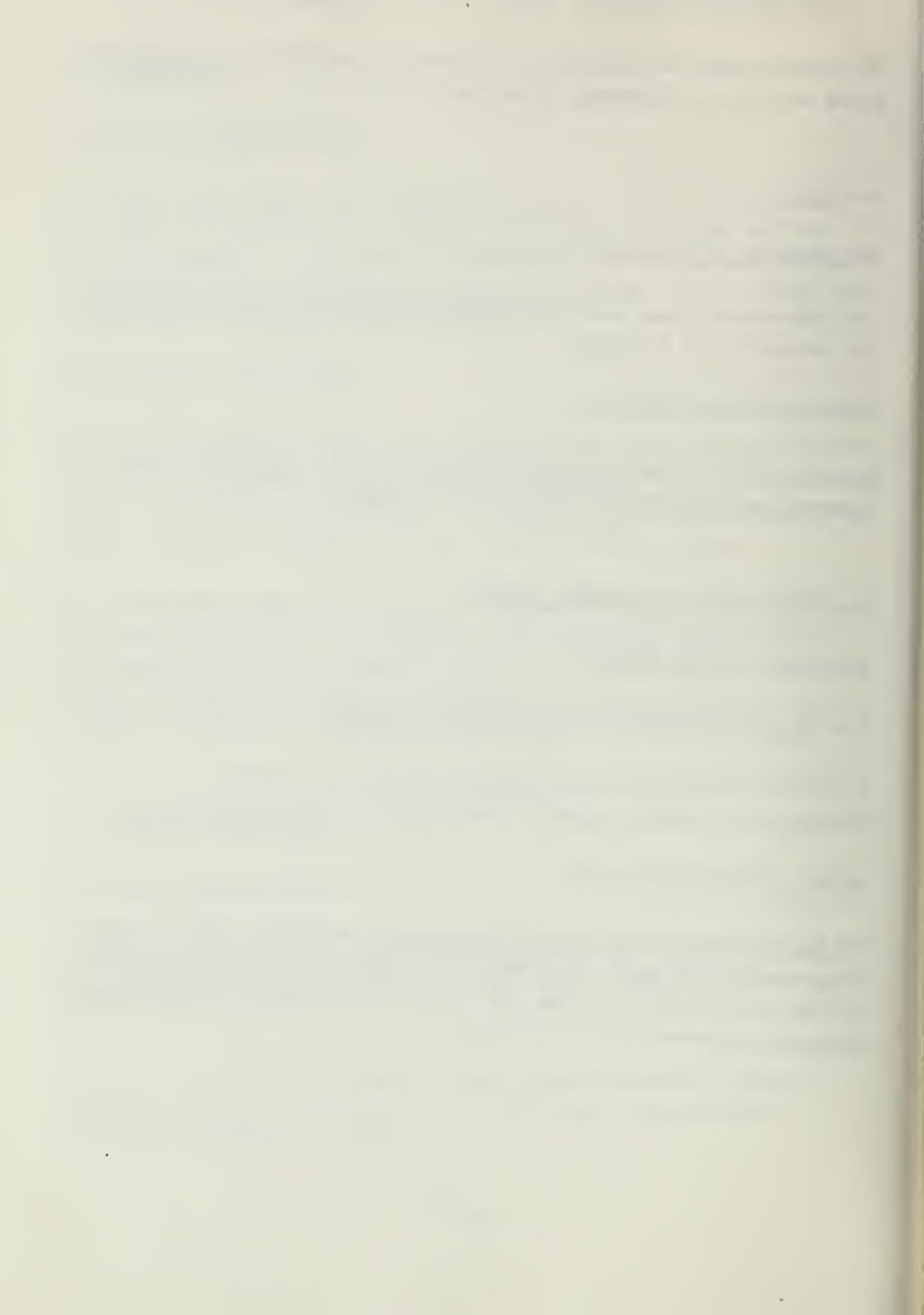
APPLICABLE YBC FEIR MEASURES

A series of two archival studies have been completed.

A qualified archaeologist was retained by the City to conduct a preconstruction testing program on the Moscone Convention Center site.

PROPOSED ADDITIONAL MEASURES

HUD has released the Project from archaeological restraints (Henry Dishroom, Area Manager, HUD, letter dated February 6, 1981); the Redevelopment Agency and HUD are consulting with SHPO and the Advisory Council on a Memorandum of Agreement concerning Historic Buildings.



A-VIII. UNAVOIDABLE SIGNIFICANT ENVIRONMENTAL EFFECTS (Central Block 1)

The unavoidable significant environmental effects of implementation of the new mixed-use proposal on CB-1 are generally within the limits described for the four alternatives in the YBC FEIR on pages 511 - 516. Those instances where the effects would differ from or exceed those of the four alternatives are described below:

Land Use and Social Characteristics: Construction of 2,200 hotel rooms and 500 dwelling units on CB-1 would place more concentrated hotel uses in the YBC area than would Alternative A and more concentrated residential uses on CB-1 than would Alternatives B and C. To a greater extent than in Alternatives A or B, the hotel uses would make CB-1 part of a day-and-night activity center extending from Market St. to the convention center.

Urban Design and Visual Aspects: The GSA Building at 49 Fourth St. would be demolished. The building is included in the City Planning Commission Listing of Architecturally and/or Historically Important Structures in the Downtown and rated "B" in the Heritage Survey; it has been determined to be ineligible for listing in the National Register.

Community Services: There would be additional flows of sewage from CB-1 to the treatment plants and an additional contribution to overflows into the Bay until completion of the City's wastewater management system. Additional solid wastes would also be produced on CB-1. Demands for police protection would be increased and an additional patrol car and officers to staff it might be required to provide service.

Resource Use: Because of the hotel and residential uses, the operating energy demands for CB-1 under the new mixed-use proposal would be more than those of the block under Alternative A, the alternative with the highest energy demand for CB-1. Projected water consumption would be about twice that of CB-1 under Alternative D, the alternative with the greatest water demand from CB-1.

A-IX. SHORT TERM VS. LONG TERM IMPLICATIONS (Central Block 1)

The short-term and long-term effects of implementation of the new mixed-use proposal within the redevelopment area on CB-1 would be similar to those evaluated for the four alternatives in Section IX of the YBC FEIR. On the GSA site outside the redevelopment area, 49 Fourth St. (included in the City Planning Commission Listing of Architecturally and/or Historically Important Buildings in the Downtown) would be demolished and replaced with new construction.

A-X. IRREVERSIBLE ENVIRONMENTAL CHANGES (Central Block 1)

Irreversible environmental changes resulting from implementation of the new mixed-use proposal on CB-1 would not differ from those resulting from development on the site under the four YBC alternatives. The one exception would be the demolition of the GSA Building at 49 Fourth St. and its replacement by new construction. For a full discussion of the irreversible environmental changes in the YBC area, refer to Section X, pages 518 - 518a of the YBC FEIR.

A-XI. GROWTH INDUCING IMPACT (Central Block 1)

The 2,200 hotel rooms included in the new mixed-use proposal for CB-1 would be a net addition to the quality hotel-room stock of San Francisco and represent an increase of 1,500 rooms above the 700 considered for CB-2 (and CB-1 as a variant) under Alternative A in the YBC FEIR. Tourism is a "basic industry," and is the City's leading source of income.^{/1/} Visitor expenditures in San Francisco are an important factor in the City's economy, because the majority of tourists, commercial travelers and convention delegates are from outside the City and are spending "new money" which originates from outside of the Bay Area. This new money would be income created in the City without subtracting income from other sectors of the San Francisco economy.

The 500 market-rate residential units would be expected to stimulate a greater demand for residential-serving retail uses, such as grocery stores or pharmacies, in the vicinity than would the 100 units or 200 units proposed for CB-1 in Alternatives B and C, respectively. Construction and operation of the other uses proposed for CB-1 would not be expected to induce growth beyond that evaluated for the YBC alternatives on pages 519 - 520c of the YBC FEIR. Employment generated on CB-1 would be less than that generated on the block under Alternatives A, B or D.

FOOTNOTE

^{/1/} Security Pacific Bank, September 30, 1979, Northern Coastal Monthly Summary of Business Conditions.

B-IV. PROJECT DESCRIPTION: HIGH SCHOOL DEVELOPMENT ON SOUTHERN BLOCK 4

The new proposal evaluated in Part B of this Supplement would involve the construction of a private high school at the southeast corner of Third and Harrison Sts. (see Figure 8, page 92) on a portion of Southern Block 4 (SB-4), designated as Parcels 3763-A and -C. The decision for the proposal would be based on the approval of a land disposition agreement by the Redevelopment Agency Commission by mid-summer 1981. This proposal differs from the light-industrial uses (see Table 17) considered for SB-4 in the four alternatives in the YBC FEIR (see Figures 1 - 4, pages 10, 12, 13 and 15, respectively), and the November 1977 Tentative Proposal. The high school would serve approximately 300 students. The building would cover about 70% to 80% of the 25,200 gross sq. ft. of land area on the site and would not exceed a height of 40 feet. Approximately twenty surface parking spaces would be provided for the school's use.

TABLE 17: COMPARATIVE USES AND FLOOR AREA* OF HIGH SCHOOL AND YBC FEIR ALTERNATIVES ON PROPOSED SITE ON SB-4 (1988 BUILD-OUT)

<u>Use</u>	<u>1980</u>	<u>1988 YBC FEIR Alternatives</u>				<u>1988</u> <u>High-School</u>
	<u>Existing</u>	<u>Alt. A</u>	<u>Alt. B</u>	<u>Alt. C</u>	<u>Alt. D</u>	<u>Proposal</u>
Lt. Industrial	--	88,000	127,000**	136,000**	136,000**	--
Private Parking	--	130 spaces	--	--	--	20 spaces
Vacant Lot and Parking	25,200	--	--	--	--	--
School	--	--	--	--	--	25,200 +

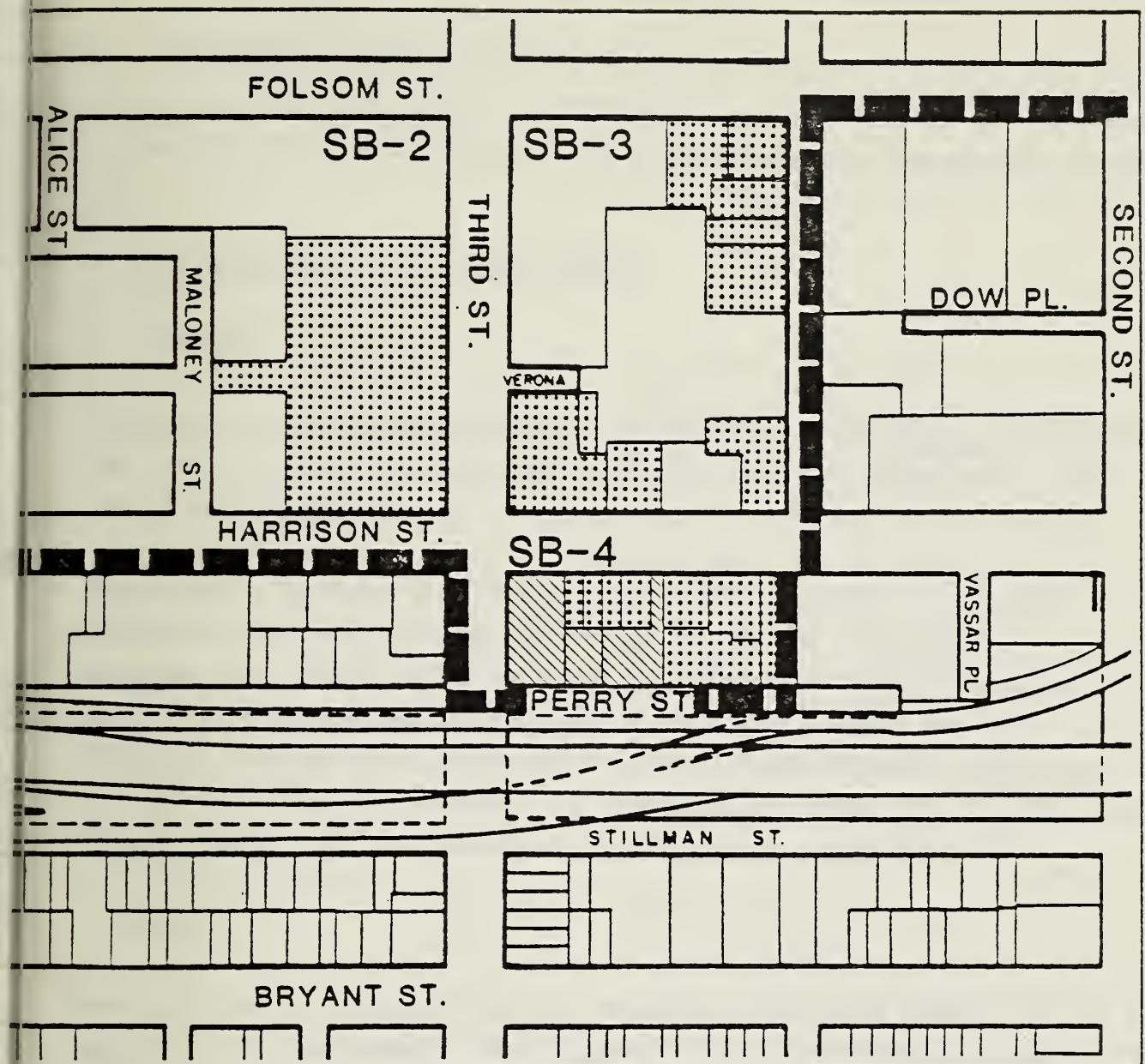
*Area is in square feet unless otherwise noted.

** Accessory parking would be required for the light-industrial uses by the City Planning Code; except for Alternative A, the number of spaces for each alternative was not specified in the YBC FEIR.

+Land surface area; school would serve about 300 students.

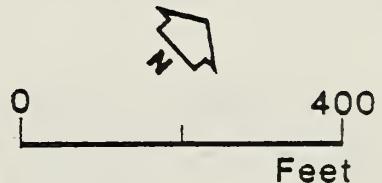
NOTE: Table A-1 (page 7) of the YBC FEIR Appendices shows Parcels 3763-A, -B and -C grouped together. Parcel 3763-B, containing about 9,800 gross sq. ft., is not a part of the site proposed for the private high school. Parcel 3763-B is assumed in the Supplement to continue to have the uses proposed for it in the four YBC FEIR Alternatives. Yerba Buena Center uses on Parcels 3763-A and -C are assumed to be about 72% of the gross sq. ft. evaluated for the three parcels; this is the proportion of the land area contained in Parcels 3763-A and -C.

SOURCE: San Francisco Redevelopment Agency and Table A-1, Appendix A, page 7, in the YBC FEIR Appendices.



LEGEND

- [Diagonal lines] High School Site
- [Dots] Existing, to Remain
- [Solid black] YBC Area Boundaries



PROPOSED HIGH SCHOOL
SITE ON SB - 4

8

B-V. ENVIRONMENTAL SETTING (Southern Block 4)

A. LAND USE, ZONING, AND VISUAL ASPECTS

1. LAND USE

Land uses in the area surrounding YBC are described in the YBC FEIR, pages 63 - 64. An overview of the land uses within YBC itself is presented on pages 64 - 68 of the YBC FEIR.

The portion of Southern Block 4 (SB-4) within YBC supports several small light-industrial uses fronting on Harrison St., between Third and Hawthorne Sts.; these include an electrical service company and a radiator works. There are two educational uses on the block. One is the Adult Vocational Program; the other is the College of Recording Arts, associated with the Sonic Arts Corporation. The proposed high-school site includes land currently being used as a temporary parking lot and a vacant back lot.

2. ZONING

The City Planning Code Use Districts for YBC as a whole are shown in Figure 6, page 21 of this Supplement. SB-4 is zoned M-1 for light-industrial uses. The permitted Basic Floor Area Ratio is 5:1. The City Planning Code describes M-1 districts as suitable for small industries. Industries with "noxious characteristics" are excluded./1/ Secondary and post-secondary educational institutions are permitted uses./2/

Height and Bulk Districts for YBC are shown in Figure 11, page 76 of the YBC FEIR. SB-4 is in a 40-X district which imposes a building height limit of 40 feet. Bulk limits do not apply in the 40-X district.

The August 17, 1979 Yerba Buena Center Redevelopment Plan Map shows SB-4 as in the Business Services and Light Industry Land Use District. Permitted

principal uses include institutional and recreational buildings, offices, retail stores, personal service establishments, restaurants, theaters, off-street parking structures, laboratories, wholesalers, storage, business services and repairs and light industries.

3. VISUAL ASPECTS

All of the buildings in the YBC portion of SB-4 front on Harrison St. Together they form a low, continuous earth-toned facade. A narrow alley divides the row of buildings approximately in half, runs perpendicular to Harrison St., and is fenced off from Harrison St. The temporary parking lot fronting on Third St. is roughly paved and extends from Harrison St. to Perry St. The view of SB-4 from Perry St. includes this parking lot on the left, a weed-covered vacant lot in the center, and the backs of two low-rise, light-industrial buildings on the right. The vacant lot runs behind the Harrison St. buildings and slopes upward from the temporary parking lot on Third St. to the east by about 15 to 20 ft. Directly south of the site is the elevated Interstate 80 freeway.

FOOTNOTES

/1/ City Planning Code, 1979, Article 2, Sec. 210.5.

/2/ Ibid., Article 2, Sec. 217(g) - (i).

B. HOUSING AND BUSINESS RELOCATION

SB-4 contains seven currently active light-industrial and educational businesses and a temporary parking lot. There are no residences on the block.

C. SOCIAL CHARACTERISTICS

The YBC FEIR contains a detailed description of the demography and social characteristics of the YBC area on pages 92 to 96. There are no residences on SB-4.

Appendix C, page 21 of the YBC FEIR Appendices lists and describes available social services for the South-of-Market area. There continues to be a need in YBC for more commercial services, restaurants, grocery stores, parks, improved medical services, community outreach programs, and child-care facilities (YBC FEIR, page 96).

D. ECONOMICS

Currently, there is no direct employment at the proposed high-school site; the site is presently occupied by about 12,300 sq. ft. (surface area) of unattended self-park parking lots, and by about 12,900 sq. ft. (surface area) of vacant land. The remaining parcels on SB-4 contain an estimated 34,650 sq. ft. of light-industrial and other uses, which employ about 70 persons/1/.

FOOTNOTE

/1/ Based on one employee per 500 gross sq. ft. of light-industrial space (YBC FEIR Appendices, Appendix D, page 29).

E. COMMUNITY SERVICES

1. WATER

Water delivery system details are illustrated in Appendix E on page 43 of the YBC FEIR Appendices. SB-4 is served by a 30-inch diameter main under Harrison St.

2. SEWERS

The Bureau of Sanitary Engineering of the San Francisco Public Works Department provides a combined storm- and sanitary-sewer service to the project area. The project area is served by 3-ft. by 5-ft. brick mains under Third St. and Harrison St. System details appear in Appendix E, page 45 of the YBC FEIR Appendices. No wastewater is currently produced on the site.

The North Point Water Pollution Control Plant currently treats stormwater and sewage flows from the area. This Plant is being phased out and will probably be replaced when the Southeast Water Pollution Control Plant is constructed, and if the wet-weather portions of the Wastewater Master Plan are built.

3. ELECTRICITY, GAS AND STEAM

The Pacific Gas and Electric Company furnishes electricity, natural gas, and some steam power in the City of San Francisco. Electricity is provided to SB-4 by the 225 MVA (million volt ampere)-capacity Mission St. Substation. The natural gas distribution system and steam-generating plants are described in the YBC FEIR, page 122.

4. SOLID WASTE

The Golden Gate Disposal Company, a private firm, collects all solid wastes from the SB-4 area. Disposal operations are described on pages 122-123 of the YBC FEIR.

5. COMMUNICATIONS

Telephone service is provided by Pacific Telephone and Telegraph Company.

6. POLICE

SB-4 is patrolled by officers of the San Francisco Police Department from the Southern Station at 850 Bryant St. Response time to the site is approximately five minutes (YBC FEIR, page 124).

7. FIRE

Station Nos. 1, 8 and 13 of the San Francisco Fire Department serve the Yerba Buena Center area. The station closest to SB-4 is Station No. 1 at 416 Jessie St. Response time is three minutes or less (YBC FEIR, pages 124 - 125).

8. SCHOOLS

No school-age children are currently living on SB-4. Local schools are discussed in the YBC FEIR, page 125.

9. PARKS AND RECREATION

There are no parks or mini-parks in the YBC area. The parks nearest SB-4 are the 0.2-acre Langton and Howard Mini-Park, and the 0.9-acre South Park, in the center of South Park Ave. between Second and Third Sts. and Brannan and Bryant Sts. (YBC FEIR, page 126).

10. MEDICAL

San Francisco General Hospital, at 1001 Potrero Ave., is the nearest public hospital. City ambulance service response time from the hospital to the YBC area averages four to six minutes (YBC FEIR, page 127).

F. TRANSPORTATION

1. STREET SYSTEM

The proposed site of the high school on SB-4 would be on the southeastern corner of the intersection of Third and Harrison Sts. Third St. and Fourth St. form a principal north-south one-way pair, with the northbound traffic on Third St. The James Lick Freeway (Interstate 80), adjacent to the site, is accessible northbound from Fifth St. and southbound from Fourth St. For a more-detailed discussion of the entire street system in and around the YBC area, see Section V.F., pages 130 - 136 of the YBC FEIR.

2. TRAFFIC CHARACTERISTICS

Pedestrians

Pedestrian volumes on Third St. near the site are moderate (see Table 13, page 137 of the YBC FEIR for definition) throughout the day, except for surges

associated with Southern Pacific commute movements. Harrison St. pedestrian volumes are generally light (see YBC FEIR, pages 137 - 138 for further details on pedestrian activity in the YBC area).

Transit

The site is within four blocks walking distance from the Transbay Terminal (A.C. Transit), from the Southern Pacific Railroad terminal, and from Market St. (Muni and BART lines). Muni bus lines, which directly serve the site on Third or Harrison Sts., are the 15-Third, 30-Stockton, 22-Fillmore, 33-Ashbury, and 19-Polk. Other forms of transit, such as SamTrans buses, Golden Gate Transit buses, and jitneys are discussed in the YBC FEIR, pages 138 - 139.

Mixed Vehicles

Third St. carries the highest daily vehicular volumes in the YBC area. However, during the p.m. peak hour of 4:30 to 5:30 p.m., its intersections with Folsom and Bryant Sts., north and south of the site, respectively, are not congested; the vehicular volumes at both intersections during the peak 15-minute period are less than 60% of the service volumes corresponding to Level of Service D (see Appendix B, Table B-1, on page 137 of this Supplement, and Table 19, page 149 and Table 21, page 153 of the YBC FEIR).

G. CLIMATE AND AIR QUALITY

The San Francisco climate is described in detail in the YBC FEIR, pages 158 to 160. Appendix C, page 138 of this Supplement, contains an air pollutant summary for San Francisco, based on measurements made by the Bay Area Air Quality Management District (BAAQMD). The City as a whole experiences occasional excesses of the carbon monoxide (CO) and total suspended particulate (TSP) standards. All other pollutant concentrations measured (O_3 , NO_2 , and SO_2) are within State standards. Downtown San Francisco, as well as other urban centers in the Bay Area, has experienced high, but steadily decreasing, lead concentrations over the past few years. Yearly

means of the 24-hour airborne lead concentrations monitored at the 939 Ellis St. BAAQMD monitoring station in San Francisco were 0.00205 milligrams per cubic meter (mg/m^3) in 1976, 0.00133 mg/m^3 in 1977, 0.00105 mg/m^3 in 1978, and 0.00075 mg/m^3 in 1979./1/ The State 24-hour lead standard is 0.0015 mg/m^3 .

Over 90% of street-level carbon monoxide is emitted by vehicular sources. CO concentrations, therefore, can vary greatly from place to place within the City. SB-4 is affected by CO from Harrison St., Third St., and the elevated James Lick Freeway (Interstate 80) above the site. Table 18 shows estimations of present roadside CO levels along these roadways (at road level).

TABLE 18: ESTIMATED 1980 WORST-CASE (POOR DISPERSION) ROADSIDE CO CONCENTRATIONS AT SB-4

<u>Street</u>	<u>Evening Peak Hour</u>	<u>CO Concentration * in ppm **</u>	<u>Highest 8-Hour Average</u>
Harrison St.	18.0		9.6***
Third St.	21.4		11.4***
Interstate 80	42.4***		18.8***

* Roadway-generated concentrations were added to "background" concentrations. Background concentrations were assumed to be 14.4 ppm for one hour and 8.3 ppm for eight hours.

** ppm: parts per million.

*** Exceeds the applicable standards of 35 ppm for one hour and 9 ppm for eight hours.

SOURCE: Environmental Science Associates, Inc., using BAAPCD, 1975, and CalTrans traffic data for Interstate 80.

FOOTNOTE

/1/ 1976 and 1977 data from BAAQMD, 1979, Information Bulletin 4-4-79; 1978 and 1979 data from California Air Resources Board 1978, (1979), California Air Quality Data: Summary of 1978 (1979) Gaseous and Particulate Pollutants.

H. NOISE

The Transportation Noise Element (Department of Public Works, 1974) has mapped SB-4 as part of a large downtown noise zone that experiences a "background" noise level (expressed as the 24-hour average noise level, Ldn/1/) of approximately 65 dBA/2/. This area characterization may be an underestimation of the 24-hour averaged noise level at the specific SB-4 location because of proximity to the freeway. The Noise Element also shows SB-4 adjacent to a "thoroughfare" noise level (Ldn) of 80 dBA, produced by highway traffic on the elevated James Lick Freeway (Interstate 80). This noise level would be that experienced at roadside above the site. Some attenuation of this 80 dBA level would occur at ground level at the SB-4 site.

In preparation of the YBC FEIR, 24-hour noise measurements were made at SB-4 on Harrison St. between Hawthorne and Third Sts. on July 26-27, 1977. The measured noise levels are presented in Appendix H, Table H-8, page 139 of the YBC FEIR Appendices. These data yield an on-site evening peak-hour (4:30 p.m. - 5:30 p.m.) average noise level (Leq)/3/ of about 71 dBA, a daytime (7:00 a.m. - 10:00 p.m.) average noise level (Leq) of 70 dBA, and a 24-hour average noise level (Ldn) of 72 dBA. CalTrans highway traffic data for Interstate 80 show that traffic on Interstate 80 near SB-4 has increased 3% since 1977. This increase would result in no perceptible change in noise levels over those measured in 1977.

The City has established land-use compatibility criteria for community noise (Department of City Planning, 1974). These criteria are given in Figure H-1 of Appendix H, page 145 of the YBC FEIR Appendices.

FOOTNOTES

/1/ Ldn: an averaged sound level measurement based on human reaction to cumulative noise exposure over a 24-hour period. To account for the greater annoyance at night, 10 dBA are added to measured noise levels between 10:00 p.m. and 7:00 a.m.

/2/ dBA: decibels measured on the A-weighted scale, which is sensitive to the frequency response of the typical human ear.

/3/ Leq: The equivalent steady-state sound level, which in a stated period of time would contain the same acoustic energy as the time-varying sound level during the same time period.

I. RESOURCE USE

1. ENERGY

Electricity and natural gas service is provided in the project area by Pacific Gas and Electric Company (PG&E). New demands for electricity statewide will be met primarily with nonrenewable energy resources, including natural gas, coal and nuclear fuels. Additional information may be found in Section V.I., YBC FEIR, pages 186 - 188.

2. WATER

The San Francisco Water Department, under the control of the San Francisco Public Utilities Commission, provides water to the City of San Francisco from the Hetch Hetchy reservoir system. Discussion of the Hetch Hetchy system delivery capacity and storage capacity is in the YBC FEIR, pages 188 - 189.

SB-4 currently has two-story buildings devoted to light-industrial uses. These buildings currently require approximately 381,000 gallons of water per year./1/ No water is currently used on the proposed high-school site.

FOOTNOTES

/1/ Calculation based on Table 28: Current Water Consumption by Land Use, YBC FEIR, page 189, and on Appendix A, Table A-1, page 1 of the YBC FEIR Appendices.

J. GEOLOGY AND SEISMOLOGY

There are no active earthquake faults in San Francisco. The major faults which could affect the site are the San Andreas and the Hayward faults. Potential earthquake hazards to structures on SB-4 include: groundshaking and ordinary subsidence (settling of compressible earth).

Franciscan Bedrock is near the surface in SB-4. Twenty to fifty feet of unconsolidated sediments cover the bedrock (YBC FEIR Appendices, page 149). Franciscan Bedrock is normally a very stable foundation, but its bearing strength in SB-4 may have been weakened by the shearing forces of past earthquakes. A major shear zone has been mapped near the site, and may go through it (YBC FEIR Appendices, page 151). There is no landfill on the site, and the undifferentiated deposits overlying the bedrock mostly have fair to good stability. SB-4 is mapped as an area with a comparatively low potential seismic hazard (classified as Type 3, see YBC FEIR, page 203). This mapping is based on soil characteristics alone, however; the possible presence of sheared Franciscan bedrock could reduce ground stability.

The YBC FEIR contains maps of surface soil composition and of areas of potential seismic hazard for the YBC area on pages 195 and 203.

K. HYDROLOGY

There are currently no water courses, springs or ponds on SB-4. The area is low-lying (about 25 ft. above sea level), and receives surface runoff from areas to the north and east. The existing sewer and storm drain system is discussed in detail in the YBC FEIR on page 207. The groundwater table is approximately 10 ft. below the surface (YBC FEIR, page 208).

L. ECOLOGY

The site for the proposed school on SB-4 consists of a temporary parking lot and a vacant lot. The vacant area supports plant species of weedy herbs,

shrubs, and grasses. Wildlife under these conditions consists primarily of insects and urban-area birds. No rare or endangered plant or animal species has been noted in the YBC area.

M. ARCHAEOLOGICAL AND HISTORICAL ASPECTS

1. ARCHAEOLOGICAL RESOURCES

The South-of-Market area has been a site of human activity from prehistoric times to the present. The history of the area, and the possible remains of each period of activity, are discussed on pages 212 to 214 of the YBC FEIR. The known site of archaeological remains nearest to SB-4 is a shell mound some 10 ft. deep, discovered in 1926 on the south side of Harrison St. and west of Third St. This site is just across Third St. from SB-4 (outside the redevelopment area). The shell mound has been recorded as 4-SF-2. It is unlikely that any vestige of the recorded shell mound (4-SF-2) has survived past construction activity in the area./1/

2. HISTORIC BUILDINGS

Southern Block 4 contains no buildings listed as being of historical or architectural interest.

FOOTNOTE

/1/ J.L. Thomas, Archaeological Consulting and Research Services, Inc., July 28, 1977, letter report to Environmental Science Associates, Inc., for the YBC FEIR. See YBC FEIR, page 212.

B-VI. ENVIRONMENTAL IMPACTS (Southern Block 4)

A. LAND USE, ZONING AND VISUAL ASPECTS

1. LAND USE

The high school would be an educational land use, rather than a light-industrial use as was proposed in YBC Alternatives A, B, C and D. The principal change in land use from the existing condition would be the conversion of rubble-strewn, weedy or paved lots to an area of active use. The proposed private high school would be compatible with other educational uses already on the block, the Adult Vocational Program and the College of Recording Arts, and would not conflict with the existing light-industrial businesses.

2. ZONING

A private high school would be a permitted use under the Redevelopment Plan and the City's M-1 Planning Code Use District for SB-4.

The recommendations of the Mayor's Select Committee on YBC explicitly support the creation of a high school in the YBC area. Point No. 16 recommends:

That institutional and community uses be considered for the remainder of the sites; and that a site be reserved for a downtown high school as close as possible to the South-of-Market campus of San Francisco Community College (YBC FEIR Appendices, page 19)./1/

The private high school site on SB-4 would not be near the San Francisco Community College campus at Fourth and Mission Sts., but it would otherwise be consistent with the recommendation. The proposed school would also be consistent with the Redevelopment Agency's policy to encourage community uses in the YBC area.

3. VISUAL

No specific plans for a private high school have been prepared. The school would be low-rise, not exceeding 40 ft. This would be architecturally consistent with other low-rise buildings on the block. The fenced-in alley on Hawthorne St. would probably be opened for access. The weeds in the vacant lot and the temporary parking lot use would be removed.

B. HOUSING AND BUSINESS RELOCATION

All seven of the existing light-industrial businesses adjacent to the school site on SB-4 would remain after construction of the proposed school. The school would replace the temporary parking lot and some vacant land. Table 32, page 241 of the YBC FEIR contains a business relocation schedule for the rest of the YBC area.

C. SOCIAL CHARACTERISTICS

The proposed school for SB-4 would have little impact on local South-of-Market support services. The 300 students would be in the area during the day; because on-campus lunch facilities would be provided at the school, it is expected that the activities of most of the students would generally be confined to the school campus during the day. Student activities would replace the activities in the vicinity of the blue-collar workers who would be employed on the site under Alternatives A, B, C and D.

D. ECONOMICS

The proposed high school would employ an estimated 40 to 42 persons, consisting of about 22 full-time teachers, 4 administrative, 12 staff support persons, 2 custodians; were full cafeteria service to be provided, up to 2 additional full-time cafeteria workers would be employed./1/ Total employment created by the project represents a net increase of 40 to 42 jobs

at the site. This would be about 77% fewer jobs than would be created by the light-industrial uses in Alternative A, and about 86% fewer than in Alternatives B, C and D. About 90% of the employees at the high school would be white-collar workers, primarily teachers, rather than the blue-collar workers who would be employed in the light-industrial uses proposed in the YBC alternatives.

The proposed private high school would be exempt from property taxes/^{2/}, and payroll and business taxes./^{3/} The industrial and parking uses proposed for Alternatives A, B, C and D would all generate more property, business and payroll tax revenues to the City and County than would the high-school project.

Some students currently attending San Francisco high schools might transfer to the proposed private school, resulting in a loss of ADA-based (Average Daily Attendance) funds to the San Francisco Unified School District (SFUSD). Using a worst-case assumption in which all 300 students would transfer to the proposed high school from SFUSD schools, the SFUSD's 1980-81 general fund budget would be decreased by approximately \$597,600. Costs to SFUSD would not decrease in proportion to the number of students leaving the District, because of fixed and state-mandated expenditures; therefore, expenditure levels for remaining students would decrease/^{4/}.

FOOTNOTES

/1/ Employment generated from the proposed high school was based on the employment factors and student-per-teacher ratios of Bridgemont High School. Information was provided by Dr. W. Houtt, President, and M. Cunningham, Assistant to the President; Bridgemont High School, telephone communications, April 3 and 6, 1981.

/2/ Sections 4(b) and 5 of Article XIII of the Constitution of the State of California and Sections 214, 254.5, and 259.5 of the Revenue and Taxation Code.

/3/ San Francisco Payroll Expense Tax Ordinance No. 275-70 and San Francisco Business Tax Ordinance No. 245-68.

/4/ P. Tom, Budget Director, San Francisco Unified School District, telephone communication, November 18, 1980.

/5/ The decrease in the 1980-81 budget was based on the current 1980-81 revenue limit of \$1992 per unit of ADA (Average Daily Attendance) and assumes that each student represents a unit of ADA.

E. COMMUNITY SERVICES

1. WATER

The 30-inch-diameter steel water main under Harrison St. would be sufficient to serve the proposed school (YBC FEIR, page 292).

2. SEWERS AND SEWERAGE

The proposed school would produce approximately 1,100 gallons of wastewater per day on the average./1/ This would be about one-seventh the wastewater produced by the light-industrial uses proposed under Alternative A, the alternative with the lowest generation from the site./2/ No City sewer mains would have to be constructed or relocated to serve the proposed high school or any of the four YBC alternatives (YBC FEIR, page 292).

3. ELECTRICITY

PG&E can meet the demand for electricity from full development of YBC (YBC FEIR, page 297). The YBC FEIR discusses PG&E's scheduled system alterations on pages 296 - 297. These alterations would be made whether or not the school were built. The PG&E distribution system would be able to supply the proposed high school without modification./3/

4. SOLID WASTE

Solid wastes generated by the proposed school would amount to approximately 600 pounds per day./4/ This is approximately one-quarter the amount produced by any of the four alternatives evaluated in the YBC FEIR for the same site./5/ The Golden Gate Disposal Company would be able to accommodate this demand. Further discussion of solid-waste disposal for the YBC area is on pages 297 - 298 of the YBC FEIR.

5. COMMUNICATIONS

Pacific Telephone and Telegraph has stated that it would be able to provide service at any of the levels required by the YBC alternatives (YBC FEIR, page 301). The proposed school would not be expected to require more service than would the uses proposed for the site in Alternative D, the greatest build-out.

6. POLICE

The addition of the proposed school to SB-4 would be expected to increase the current number of police calls to the area. SB-4 is now patrolled by a two-person patrol car 24 hours a day. It has a slightly higher crime rate than that of neighboring blocks, the most frequent crimes being theft and burglary, but the crime rate is lower than the average crime rate of the YBC area as a whole. Although the exact effect of the school on criminal activity at or near the site cannot be determined, the Office of the Chief of Police states that no additional police personnel or equipment would be required to patrol the area./6/

7. FIRE

The fire protection requirements of each of the four alternatives evaluated in the YBC FEIR could be met by the San Francisco Fire Department without any increase in personnel or equipment. The level of service now offered is consistent with full urban development (YBC FEIR, page 304). The proposed school would conform to the San Francisco Building Code, and its design would include sprinkler and alarm systems. No new equipment or staffing would be required by the Fire Department to serve the school.

8. SCHOOLS

No elementary or high schools currently exist in YBC and none was planned under any of the four Alternatives considered in the YBC FEIR. The proposed private high school would provide a service not previously available in the YBC area. Were the private high school to be an existing service relocated

from elsewhere in the City such as the proposed Bridgemont High School, there would be no impact on total student population in the San Francisco Unified School District. Were the high school to be a new service, then it could result in a reduction of up to 300 students currently enrolled in the District (see Section B-IV, page 105 of this Supplement).

9. PARKS AND RECREATION

No park is planned for SB-4. Park formation under each of the YBC alternatives is discussed in the YBC FEIR, pages 309 - 311.

10. MEDICAL SERVICES

The proposed high school would provide First-Aid services for its students. Emergencies would be handled by San Francisco General Hospital (Mission Emergency), at 1001 Potrero Ave. No expansion of facilities would be required.

FOOTNOTES

/1/ P. O'Kane, Accountant, San Francisco Unified School District, telephone communication, October 17, 1980.

/2/ Calculation based on YBC FEIR Appendices, Appendix A, Table A-1, page 7, and on Appendix E, Table E-2, page 49. A worst-case estimate of 100% of water consumption discharged into sewers has been assumed.

/3/ R.H. Fohlen, Power Engineer, PG&E, telephone communication, April 13, 1981.

/4/ Solid-waste generation factor from State Solid Waste Management Board, 19 July 1974, second bulletin in series entitled, "Solid Waste Generation Factors in California."

/5/ Calculation based on YBC FEIR Appendices, Appendix A, Table A-1, page 7, and on Appendix E, Table E-3, page 51.

/6/ J.P. Shannon, Deputy Chief of Police, Administration, letter dated October 22, 1980.

F. TRANSPORTATION

In this section, travel and parking demands of the proposed 300-student private high school are compared with those generated by the light-industrial uses proposed for the site in YBC Alternatives A, B, C and D. The methods outlined in pages 56 - 61 and pages 84 - 88 of the YBC FEIR Appendices were generally used to make these estimates. Because a high school use was not evaluated quantitatively in the YBC FEIR, trip generation, modal split, and parking demand estimates for the high school were derived from CalTrans studies.^{1/}

Light-industrial use of the site was proposed in all four YBC alternatives, as shown in detail in Table A-1 on page 7 of the YBC FEIR Appendices. The high school's peak travel hour would be 3:00 - 4:00 p.m.; the peak travel hour for light-industrial use would be expected to conform more closely to the peak traffic hour of 4:30 - 5:30 p.m. in the YBC area as a whole.

TRAVEL DEMAND ANALYSIS

Total Travel

Table 19 shows person-trips which would be generated by the high school, compared to those which would be generated by each of the alternatives. (Trips made entirely within the YBC area, such as lunchtime pedestrian trips, are excluded from Table 19.) The site would be expected to generate fewer total trips with the high school than with YBC Alternatives B, C or D, and fewer peak-hour trips than with any of the uses proposed for the site in the four YBC alternatives. Lunchtime pedestrian trips by some of the 300 high school students would increase pedestrian crossings at the intersection of Third and Harrison Sts.

Vehicular Travel

Similarly, as shown in Table 20, the high school would generate fewer vehicular trips than would YBC Alternatives B, C or D, and fewer peak-hour trips than would any of the uses proposed for the site in the YBC FEIR.

TABLE 19: TRAVEL PROJECTIONS FOR THE PROPOSED HIGH SCHOOL SITE ON SB-4 FOR 1988 - PERSON TRIP ENDS

<u>Time</u>	<u>High School</u>	ALTERNATIVES			
		A	B	C	D
Weekday (24 Hr.)	760	700	1,015	1,090	1,090
Weekday Peak Hour (4:30 - 5:30 p.m.)	30*	80	120	130	130

* The existing peak traffic hour of YBC-area streets is 4:30 to 5:30 p.m.; the high school's peak p.m. hour for person trips would be 3:00 to 4:00 p.m.

SOURCE: Environmental Science Associates, using YBC FEIR methodology.

TABLE 20: TRAVEL PROJECTIONS FOR THE PROPOSED HIGH SCHOOL SITE ON SB-4 FOR 1988 - VEHICLE TRIP ENDS

<u>Time</u>	<u>High School</u>	ALTERNATIVES			
		A	B	C	D
Weekday (24 Hr.)	390	360	520	560	560
Weekday Peak Hour (4:30 - 5:30 p.m.)	15*	50	75	80	80

* The high school's peak p.m. hour for vehicle trips would be from 3:00 to 4:00 p.m., during which about 25% of the average daily traffic, or about 100 trips, would occur.

SOURCE: Environmental Science Associates, using YBC FEIR methodology.

Transit Travel

About 40% of the transit use due to the proposed high school would be on Muni. As shown in Table 21, the number of Muni trips generated by the high school would be less than the number of estimated trips generated by the site under any of the four YBC alternatives.

TABLE 21: MUNI TRAVEL PROJECTIONS FOR THE PROPOSED HIGH SCHOOL SITE ON SB-4
FOR 1988 - PERSON TRIP ENDS

<u>Time</u>	<u>High School</u>	<u>ALTERNATIVES</u>			
		A	B	C	D
Weekday (24 Hr.)	90	100	140	150	150
Weekday Peak Hour (4:30 - 5:30 p.m.)	3*	8	10	10	10

* The high school's peak p.m. hour would be 3:00 - 4:00 p.m., during which about 50 person trips would be made on the Muni.

SOURCE: Environmental Science Associates, using YBC FEIR methodology.

Parking

High schools studied by CalTrans/1/ provided an average of 0.21 parking spaces per student. Twenty spaces are proposed for the high school on SB-4, an average of 0.07 per student. This is not unreasonable for an urban high school served by an extensively used transit system./2/

Based on the CalTrans ratio, Table 22 shows that the parking demand of the high school would be less than the demand from the site under YBC Alternatives B, C, or D, but 10 spaces more than demand under Alternative A. Students would be expected to park south of the Interstate 80 freeway or elsewhere in the vicinity.

FOOTNOTES

/1/ CalTrans, 1975, 10th Progress Report on Trip Ends Generation Research Counts, District 4. The total number of person trip ends generated by the suburban school used in the CalTrans study would be similar to the total number of person trip ends generated by an urban school; for purposes of analysis, it was assumed that the suburban auto/school-bus modal split would be similar to the auto/transit modal split for an urban school.

/2/ The site is served by the 15-Third, 30-Stockton, 22-Fillmore, 33-Ashbury, and 19-Polk Muni bus lines.

TABLE 22: PARKING DEMAND PROJECTIONS FOR 1988 - SPACES

<u>High School</u>	ALTERNATIVES**			
	A	B	C	D
60*	50	75	80	80

* Based on parking provided at high schools studied by CalTrans (1975).

** These levels of demand could be met by provision of one space per 1,500 sq. ft. of floor space, as required by the City Planning Code for light-industrial use under M-1 zoning. About 80 spaces of private parking were proposed for the site and an adjacent parcel as part of Alternative A; the proportion to be built on the site was not specified.

SOURCE: Environmental Science Associates, using YBC FEIR methodology.

G. CLIMATE AND AIR QUALITY

1. CONSTRUCTION EFFECTS

Earthmoving, construction activities, and particularly excavation for new foundations would affect local air quality by creating large amounts of suspended particulates (dust). Impacts from high-school construction would be similar to those from the light-industrial construction evaluated for the site in the YBC FEIR, as discussed on pages 357c - 359.

2. LONG-TERM OPERATION EFFECTS

Long-term air quality impacts would be controlled largely by vehicular emissions. Table 23 shows worst-case (poor dispersion) carbon monoxide (CO) impacts at the school site on SB-4. Seven cases were considered: the existing case (1980); the 1988 base case (no development on the proposed school site); the four YBC alternatives in 1988, A through D, which all proposed varying levels of light-industrial uses for the SB-4 site; and the proposed high school in 1988. The 1988 base case CO concentrations would be lower than existing concentrations due to the projected effects (BAAQMD, 1979,

TABLE 23: ESTIMATED AND PROJECTED WORST-CASE* CO CONCENTRATIONS AT PROPOSED SCHOOL SITE ON SB-4

Year	Case	CO Concentration** in ppm***		
		Evening Peak Hour	Highest 8-Hour	Average
1980	Existing	35.5****		15.5****
1988	Base Case	21.2		9.2****
	w/o Development			
1988	YBC Alternatives:			
	A	21.3		9.2****
	B	21.4		9.2****
	C	21.4		9.2****
	D	21.4		9.2****
1988	High School	21.3		9.2****

* 85 ft. was assumed to be the diagonal distance from the elevated freeway to the ground floor of the proposed school. The model treats the 85 ft. as a ground-level distance. CO drifting down from the elevated freeway would undergo more mixing and dispersion than the model allows for. Therefore, these numbers must be interpreted as extreme worst-case CO concentrations.

** Roadway-generated concentrations from Third St., Harrison St., and Interstate 80 were added to "background" concentrations. Background concentrations were assumed to be 14.4 ppm for 1 hour and 8.3 ppm for 8 hours in 1980, and 8.4 ppm for 1 hour and 5.0 for 8 hours in 1988.

*** ppm: parts per million.

**** Exceeds the applicable standards: 35 ppm for 1 hour and 9 ppm for 8 hours.

SOURCE: Environmental Science Associates, Inc., using BAAPCD, 1975, and CalTrans traffic data for Interstate 80

EMFAC-5 Vehicular Emission Factors) of government-mandated vehicular emissions controls.

Neither the proposed school nor any of the four YBC FEIR proposals for the site would increase CO concentrations more than 0.9% over the 1988 base case local CO concentrations. CO levels at SB-4 are dominated by traffic on Third St. and by traffic on Interstate 80. None of the alternatives proposed would contribute enough traffic to either of these sources to greatly alter local CO production or concentrations.

CO levels affecting the proposed school would be high. The peak one-hour concentration would be approximately 60% of the one-hour state standard.

Eight-hour CO levels would usually be very close to the eight-hour standard and would occasionally exceed it (see Table 23).

Exterior CO levels would be great enough to interfere with outdoor activity, causing headaches and dizziness, during peak traffic hours and during periods of poor pollutant dispersion (such as thermal inversions). Possible health effects are listed opposite ranges of CO concentrations in Table 24, summarized from Table G-11, Appendix G, page 129 of the YBC FEIR Appendices. Although airborne lead concentrations in downtown San Francisco have been steadily decreasing over the last few years, spot concentrations near freeways in San Francisco could exceed the 0.0015 mg/m³ State standard during episodes of poor air quality. Three measurements made on a lot adjacent to the James Lick Freeway in July 1980 for the 2222 Twenty-Third Street PDEIR, indicated that lead concentrations there were greater than or equal to 0.0012 mg/m³. /1/

TABLE 24: HEALTH EFFECTS OF CARBON MONOIXDE (CO)

<u>CO Concentrations</u>	<u>Health Effects</u>
15 - 50 ppm	some headaches, plus loss of judgment and vision
100 ppm	increased incidence of headaches
300+ ppm	collapse and death

SOURCE: Stanford Research Institute, 1974, Present and Prospective San Francisco Bay Area Air Quality

Indoor pollutant levels could be controlled through the inclusion of building design features such as sealed windows, recirculation type ventilation systems, and orientation of all air intakes away from pollutant emission sources, such as the elevated freeway and proposed parking lot.

FOOTNOTE

/1/ The measurements were made by Bendix Environmental Research, Inc., for the 2222 Twenty-Third Street PDEIR, EE 80.110, available for public review at the Office of Environmental Review, Department of City Planning.

H. NOISE

1. CONSTRUCTION NOISE

Construction noise impacts would be similar to those noted for the light-industrial construction proposed for the site in the YBC FEIR. For an overview of construction noise impacts, refer to the YBC FEIR, pages 394 - 395. Average noise levels associated with construction activities are in Table 13, page 70 of this Supplement.

2. LONG-TERM NOISE IMPACTS AND LAND USE COMPATIBILITY

Noise at SB-4 is dominated by highway traffic on the James Lick Freeway, Interstate 80. Interstate 80 is elevated, and runs along the southern property line of the proposed school site at a height of almost 50 ft. Traffic on local streets makes a small contribution, but is, for the most part, "drowned out" by the freeway noise./1/

Estimated noise levels at the proposed school site are shown in Table 25. The height limit at SB-4 is 40 ft., which would allow for a three-story (or possibly a four-story) building.

Since the freeway is elevated, the height of the receptor makes a very noticeable difference in the noise received. The closer to ground level the receptor is, the more effective the underside of the freeway is as an acoustical shield. Highway noise at the third floor of the proposed school building could be as much as 7 dBA louder than noise at the first floor. This 7 dBA would represent an audible difference in perceived noise between the third and first floors./2/

TABLE 25: INTERSTATE 80 TRAFFIC NOISE AT PROPOSED SCHOOL SITE ON SB-4

<u>Year</u>	<u>Story or Floor* of Building</u>	<u>Peak Hour L_{eq}** (dBA)</u>	<u>Estimated L_{dn}*** (dBA)</u>
1980	First	70	72
	Second	74	76
	Third	77	79
1988	First	70	73
	Second	74	77
	Third	77	80

* Assumes that each story has a height of 13 ft. Noise receptor is the exterior wall of the proposed building facing the freeway.

** The equivalent steady-state sound level which in a stated period of time would contain the same acoustic energy as the time-varying sound level during the same time period.

*** Ldn: the Day-Night Sound Level, an averaged sound level measurement based on human reaction to cumulative noise exposure over a 24-hour period. To account for the greater annoyance at night, 10 dBA are added to measured noise levels between 10:00 p.m. and 7:00 a.m.

SOURCE: Environmental Science Associates, Inc. using U.S. Department of Transportation, FHWA Highway Traffic Noise Prediction Model, 1978, FHWA-RD-77-108, and based on CalTrans traffic data.

San Francisco land-use compatibility criteria for community noise (as described in the Transportation Noise Element of the Comprehensive Plan, 1974, and shown in YBC FEIR Appendices, Appendix H, page 145) recommend that at school sites where the exterior noise level (Ldn) is greater than or equal to 70 dBA, "new construction or development should generally not be undertaken." Even at the ground level the proposed school would need extensive noise insulation features (such as heavy masonry construction and sealed windows) to provide an acceptable indoor noise level for classroom activity. Outdoor noise levels would interfere with all outdoor activity.

FOOTNOTES

/1/ Harrison and Third Sts. would each contribute approximately 60 to 65 dBA (Ldn) to the SB-4 site in 1988. When added to noise produced by Interstate 80, these contributions would increase on-site noise levels (Ldn)

by approximately 1 dBA over noise from the freeway alone. This increase is imperceptible to the human ear.

/2/ An increase in noise levels of 10 dBA is perceived by the human ear as a doubling of noise intensity.

I. RESOURCE USE

1. ENERGY

The estimated annual operating energy demands for the proposed high school would be lower than for the light-industrial uses evaluated in any of the four alternatives considered in the YBC FEIR. The high school would require about half the energy required for the site by Alternative A, the alternative considered in the YBC FEIR requiring the least energy for these parcels. These lower demands would result because a school structure would not require the electrical energy needed to operate machines and equipment which would be typical of light-industrial development. Further, schools have reduced energy demands during holiday and summer vacation periods when light-industrial structures would continue operation. Finally, current Energy Commission standards do not apply to industrial structures, but do apply to schools/1/. These standards do not require use of renewable energy resources, such as solar or wind power.

The project is expected to have annual electric and natural gas demand curves which show substantial reductions in energy use during the month of December, (because of holidays) and the months of June, July and August (because of summer vacation). The daily natural gas demand curve would show a single peak during the hours of 7:00 to 9:00 a.m. and reduced demand during the balance of the day. The daily electrical demand curve would be similar to that shown for Alternative C in Section VI.I., YBC FEIR, page 415.

2. WATER

The proposed high school of 300 students would require approximately 1,100 gallons of water per day on the average./2/ This amount would be about

one-seventh that required by YBC Alternative A uses for the same site, which, in turn, would have the lowest water demand of the four Alternatives for SB-4. The Water Department would be able to supply the projected demand of the proposed high school.

FOOTNOTES

/1/ The Energy Commission is currently developing standards for industrial structures.

/2/ Based on information provided by P. O'Kane, Accountant, San Francisco Unified School District, telephone communication, October 17, 1980.

J. GEOLOGY - SEISMOLOGY

The outcropping of Franciscan Formation bedrock near the soil surface and the unconsolidated soils themselves could form a stable foundation for the proposed school, if the bedrock has not been sheared and damaged in past earthquakes. Bedrock stability may have been affected by a major shear zone mapped near the site (YBC FEIR Appendices, page 151). A deep foundation would not be necessary for a three- or four-story structure, so dewatering would be unlikely. The soils on the site are described as having "fair to good stability" (YBC FEIR, page 201). The greatest earthquake hazards at the site would be groundshaking and differential settlement. As required by State law, a school would be built to conform to earthquake safety standards which are more stringent than those for light-industrial buildings.

K. HYDROLOGY

The vacant, weed-covered portion of the SB-4 site currently has a permeable soil surface. Building construction, therefore, would increase rainwater runoff. The reduction in permeable soil surface would not differ from that which would result from development under Alternatives A, B, C and D. Runoff would continue to be channeled into the storm drain and sewer system.

L. ECOLOGY

Construction of the school on SB-4 would probably include provisions for some open lawn area, and trees or shrubbery along walkways. The landscaping plants would most likely be non-native species. Animals in the habitat would be restricted to insects; to birds tolerant of the urban setting, including the domestic pigeon, house finch, English sparrow, and Brewer's blackbird; and to common soil animals.

M. ARCHITECTURAL AND HISTORIC ASPECTS

It is possible that historic artifacts exist on SB-4. No precise locations for potential sites have been identified, however, so it is difficult to predict what remains might be encountered during excavation on the site. There would be no effect on any structures listed as being of historic or architectural merit.

B-VII. MITIGATION MEASURES (Southern Block 4)

This section is organized in the same sequence as the Setting and Impact sections, with the same letter designating each impact category as in those sections. All mitigation measures identified in the YBC FEIR that would pertain to high-school development proposed in this Supplement are summarized at the beginning of each section and incorporated here by reference (pages 447 - 509 of the YBC FEIR). Additional proposed mitigation measures are listed following the summary. Impact categories for which no measures are suggested are omitted from the sequence. The proposed mitigation measures would be acted upon by the Redevelopment Agency Commission just prior to approval by the Commission of the land disposition agreement for the site.

E. COMMUNITY SERVICESAPPLICABLE YBC FEIR MEASURES

The Redevelopment Agency would require the developer to install low-flow toilets, urinals, taps, and showerheads to reduce total liquid wastes discharged into the sewers.

The Redevelopment Agency would require that refuse be placed in metal dumpster containers to facilitate pick-up.

The construction site must be fenced under the Federal Occupational Health and Safety Administration Regulations.

F. TRANSPORTATION

PROPOSED ADDITIONAL MEASURES

The Redevelopment Agency would require the high school to provide food service or food vending machines on the campus to reduce noon-hour pedestrian trips from the site.

G. CLIMATE AND AIR QUALITY

APPLICABLE YBC FEIR MEASURES

HUD mitigation measures described in the YBC FEIR (pages 481-482) For indoor air pollutant control will be required only of housing in YBC. If feasible, several of those measures would be incorporated into the building design of the proposed high school on SB-4, and are excerpted below. All of the building design measures below assume sealed windows.

- Recirculation type ventilation system, with restriction of make-up air (intake air) to about seven cubic feet per minute.
- Central, forced-air heating system with summer-switch for recirculation type ventilation.
- Emission vents of structures to be separated from air intakes (15 ft. minimum).
- Air intakes (all to contain particle filters) to be located as far as possible from air pollutant sources (vehicular traffic). Placement on the roof may not be helpful in this case, because the elevated James Lick Freeway (Interstate 80) is the major pollutant source.

PROPOSED ADDITIONAL MEASURES

To minimize exposure of people to poor air quality conditions, HUD has further recommended that no active outdoor areas, such as playing fields, tennis courts and swimming pools, be provided in YBC. To meet both this recommendation and physical education requirements, the school would provide an indoor gymnasium for physical activity.

If outdoor activity must take place during the school day, it should be scheduled for the morning. The lowest daytime CO levels typically occur between 9:30 a.m. and 12:00 noon.

Mobile Source Emission Mitigation Measures

Most of the traffic near SB-4 would be generated by uses other than the high school. Traffic reduction mitigation measures undertaken by the high school would result in minor reductions in street-generated emissions at the site. The proposed parking lot for the high school would be an emissions source that the school could control. The Redevelopment Agency would require that:

- The students be encouraged to use public transportation to and from school.
- The parking lot and parking lot driveways be sited away from the school or other large barriers which could confine pollutants and prevent mixing.
- Bus drivers (should bus services be provided for students) leave engines off while waiting for students.

H. NOISE

PROPOSED ADDITIONAL MEASURES

Open areas used by pedestrians would be placed so they are screened from freeway noise by the building.

The high school would benefit from the following design mitigation measures in addition to those specified in the YBC FEIR:

- As few stories as feasible.
- Noise insulation materials in the roof.
- Windows and doors placed on the side of building away from the freeway.

Specific mitigation measures to be implemented would depend upon building design, placement and the recommendations of an acoustical engineer.

I. RESOURCE USE

PROPOSED ADDITIONAL MEASURES

The San Francisco Redevelopment Agency would develop design criteria for the high school to preclude development from significantly shading other building sites or sites outside the Project area. The Agency would review the design proposal to ensure that it would conform to these criteria.

The Redevelopment Agency would develop criteria for use in the design of the high school to minimize the avoidable, unnecessary or wasteful use of nonrenewable energy and to encourage the use of renewable energy. The Agency would review the building design to ensure that it would conform to all

criteria. See Appendix D, page 139 of this Supplement, for a sample list of such criteria.

M. ARCHAEOLOGICAL AND HISTORIC ASPECTS

APPLICABLE YBC FEIR MEASURES

A series of two archival studies have been completed.

A qualified archaeologist was retained by the City to conduct a preconstruction testing program on the Moscone Convention Center site.

PROPOSED ADDITIONAL MEASURES

HUD has released the YBC Project from archaeological restraints (Henry Dishroom, Area Manager, HUD, letter dated February 6, 1981).

B-VIII. UNAVOIDABLE SIGNIFICANT ENVIRONMENTAL EFFECTS (Southern Block 4)

The construction and operation of a private high school on Southern Block 4 would not be expected to have any unavoidable significant effects on the environment exceeding those described in the YBC FEIR. For a full discussion of the unavoidable significant effects of implementation of the four YBC alternatives, refer to Section VIII, pages 511 - 515.

Because of the proximity of the James Lick Freeway, the noise environment of the high-school site exceeds the City's land-use compatibility criteria for community noise for school development. Carbon monoxide emissions would exceed federal 8-hour standards at the site and would interfere with outdoor activities, particularly during periods of poor pollutant dispersion.

B-IX. SHORT TERM VS. LONG-TERM IMPLICATIONS (Southern Block 4)

The short-term and long-term implications of development of the YBC area are discussed in Section IX, pages 516 - 518 of the YBC FEIR. Operation of a private high school on SB-4 would differ from the stated implications in that a long-term commitment would be made to an educational use on a site where the City's land-use compatibility criteria for community noise for schools are exceeded, and Federal 8-hour carbon monoxide levels are exceeded. Land for potential tax-generating, light-industrial uses employing blue-collar workers would be lost to an educational use, which would not pay property, payroll or business taxes, and would provide predominantly white-collar employment.

B-X. IRREVERSIBLE ENVIRONMENTAL CHANGES (Southern Block 4)

Irreversible environmental changes resulting from high-school development on SB-4 would not differ from those resulting from development of the uses proposed in the four YBC alternatives. For a full discussion of those irreversible environmental changes, refer to Section X, pages 518 - 518a of the YBC FEIR.

B-XI. GROWTH INDUCING IMPACT (Southern Block 4)

Construction and operation of a private high school would not be expected to induce growth to a greater extent than would development proposed for the site in the four YBC alternatives. See Section XI., pages 519 - 520 of the YBC FEIR, for a discussion of the growth-inducing impacts of development of the YBC area.

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DOCUMENTS AND WRITTEN REPORTS

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XIV. APPENDICES

APPENDIX A: COMMUNITY SERVICES

TABLE A-1: CALCULATIONS FOR SEWAGE GENERATION FROM CB-1: 1988

<u>Use</u>	<u>Sewage Output (gal/day)</u>
1,500 Hotel Rooms (at 100% occupancy)	300,000
700-Room Arcon Pacific Hotel (at 100% occupancy)	140,000
500,000 sq. ft. of Office Space*	62,500
80,000 sq. ft. of Retail-Commercial Space*	16,000
Mercantile Bldg. (existing, when fully occupied)	12,000
St. Patrick's Church (existing)	600
500 Market-Rate Dwelling Units	<u>100,000</u>
 TOTAL	 631,100

* Including the renovated Jessie St. Substation.

APPENDIX B: TRANSPORTATION METHODOLOGY

Method of Capacity Analysis

The method of capacity analysis used in this Supplement is essentially the same as was used in the YBC FEIR. The basic difference is the way in which the results are presented. The capacity analysis used the "Critical Movement Summation" method as described in "Interim Materials on Highway Capacity," Transportation Research Circular No. 212./1/ A sample calculation is shown in Figure F-2, page 91 of the YBC FEIR Appendices. The maximum service volume for Level of Service E was assumed as intersection capacity. A service volume is the maximum number of vehicles that can pass through an intersection during a specified period in which operating conditions are maintained corresponding to the selected and specified Level of Service. For each intersection analyzed, the existing peak-hour volume was computed and a volume-to-capacity (v/c) ratio was calculated by dividing the existing volume by the capacity at Level of Service E.

In the YBC FEIR, the results of the analysis were expressed as vehicular headways with capacity being described as a "guideline headway" (see pages 89 and 89a, Appendix F, YBC FEIR Appendices). The method used in this Supplement expresses the analysis results as volume to capacity (v/c) ratios. Table B-1 relates v/c ratios to Level of Service. The YBC FEIR analyzed 15-minute periods rather than one-hour periods. The 15-minute analysis was of the worst portion of the peak traffic hour. Other analyses of the vicinity completed since the YBC FEIR have used the one-hour analysis; in order to present data in a compatible format, the one-hour analysis has been used.

Two changes since publication of the YBC FEIR account for differences in the results. The street geometrics have been altered at several of the intersections in the YBC area. Changes of this type can significantly affect the available capacity at intersections. In addition, recent counts are essentially of the same magnitude as the 1977 counts used in the YBC FEIR, showing the assumption that vehicular traffic volumes would grow by 1.8% per year to have been overly conservative. Consequently, a nominal growth rate of 1.0% per year has been assumed for the 1988 projections in this Supplement, based upon discussions with the Bureau of Traffic Engineering./2/

NOTES

/1/ Transportation Research Board, Transportation Research Circular No. 212, "Interim Materials on Highway Capacity", January, 1980.

/2/ Discussion with S. Shoaf, Traffic Engineer, Department of Public Works, Bureau of Traffic Engineering, City and County of San Francisco, April 30, 1980.

TABLE B-1: VEHICULAR LEVELS OF SERVICE

<u>Level of Service</u>	<u>Description</u>	<u>Volume/Capacity* (v/c) Ratio</u>
A	Level of Service A describes a condition where the approach to an intersection appears quite open and turning movements are made easily. Little or no delay is experienced. No vehicles wait longer than one red traffic signal indication. The traffic operation can generally be described as excellent.	less than 0.60
B	Level of Service B describes a condition where the approach to an intersection is occasionally fully utilized and some delays may be encountered. Many drivers begin to feel somewhat restricted within groups of vehicles. The traffic operation can generally be described as very good.	0.61-0.70
C	Level of Service C describes a condition where the approach to an intersection is often fully utilized and back-ups may occur behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so. The driver occasionally may have to wait more than one red traffic signal indication. The traffic operation can generally be described as good.	0.71-0.80
D	Level of Service D describes a condition of increasing restriction causing substantial delays and queues of vehicles on approaches to the intersection during short times within the peak period. However, there are enough signal cycles with lower demand such that queues are periodically cleared, thus preventing excessive back-ups. The traffic operation can generally be described as fair.	0.81-0.90
E	Capacity occurs at level of service E. It represents the most vehicles that any particular intersection can accommodate. At capacity there may be long queues of vehicles waiting up-stream of the intersection and vehicles may be delayed up to several signal cycles. The traffic operation can generally be described as poor.	0.91-1.00
F	Level of service F represents a jammed condition. Back-ups from locations downstream or on the cross street may restrict or prevent movement of vehicles out of the approach under consideration. Hence, volumes of vehicles passing through the intersection vary from signal cycle to signal cycle. Because of the jammed condition, this volume would be less than capacity.	1.00+

APPENDIX C: AIR QUALITY

APPENDIX C-1: SAN FRANCISCO AIR POLLUTANT SUMMARY 1977-1979

STATION: 939 Ellis Street, San Francisco

POLLUTANT:	STANDARD	1977	1978	1979
OZONE (O ₃) (Oxidant)				
1-hour concentration (ppm /a/)				
Highest hourly average	(0.08) 0.12/b,c/	0.05	0.11	0.08
Number of standard excesses	(0) 0	(4) 0	0	0
Expected Annual Excess/c/	0.3	0.3	0.0	
CARBON MONOXIDE (CO)				
1-hour concentration (ppm)				
Highest hourly average	35/b/	16	17	20
Number of standard excesses	0	0	0	0
8-hour concentration (ppm)				
Highest 8-hour average	9/b/	8.9	9.4	13.8
Number of standard excesses	0	1	2	
NITROGEN DIOXIDE (NO ₂)				
1-hour concentration (ppm)				
Highest hourly average	0.25/d/	0.21	0.30	0.16
Number of standard excesses	0	4	0	0
SULFUR DIOXIDE (SO ₂)				
24-hour concentration (ppm)				
Highest 24-hour average	0.05/d/	0.035	0.024	0.034
Number of standard excesses/e,f/	0	0	0	0
TOTAL SUSPENDED PARTICULATE (TSP)				
24-hour concentration (ug/m ³ /g/)				
Highest 24-hour average	100/d/	105	128	117
Number of standard excesses/f/	1	1	1	1
Annual concentration (ug/m ³)				
Annual Geometric Mean	60/d/	41	42	42
Annual standard excess	No	No	No	No

/a/ ppm: parts per million.

/b/ National standard, not to be exceeded more than once per year (except for annual standards which are not to be exceeded).

/c/ The national ozone standard was revised from 0.08 ppm to 0.12 ppm in January 1979. The number of excesses shown in parentheses is of the old 0.08 ppm standard in effect at the time. Expected Annual Excess is a three-year average of annual excesses of the new 0.12 ppm standard.

/d/ California standard, not to be equaled or exceeded.

/e/ The sulfur dioxide standard is considered to be exceeded only if there is a concurrent excess of the state ozone or suspended particulate standards at the same station. Otherwise, the national standard of 0.14 ppm applies.

/f/ Number of observed excess days (measurements taken once every six days).

/g/ ug/m³: micrograms per cubic meter.SOURCE: BAAQMD, 1977 - 1979, Contaminant and Weather Summaries.

APPENDIX D: ENERGY CONSERVATION

The following principles could be used by the San Francisco Redevelopment Agency when reviewing the design criteria of proposed buildings for the YBC Redevelopment Project.

1. Encourage the use of insulation, efficient fireplaces, and passive solar design measures to reduce the demand for natural gas used for space heating. Examples of such measures are:
 - Orient the long axis of buildings within 20° of true east-west.
 - Maximize window area on the south sides of buildings, and minimize window and door area on the north sides.
 - Provide eaves or window overhangs, or landscape with deciduous trees adjacent to walls, to shade interiors from high summer sun yet allow penetration of low winter sun.
 - Install double-pane windows and/or install insulated draperies.
 - Install masonry floors and walls opposite south-facing windows to store solar heat.
 - Install extra insulation beyond that required by State regulations in ceilings and walls and insulate the floors over unheated spaces.
 - Locate any fireplaces entirely inside the exterior wall of the structures; do not install a natural gas outlet in the fireplace.
 - Equip any fireplaces with metal fire boxes, heat exchangers and adjustable flues, or install free-standing fireplaces or Franklin-type stoves.
2. Encourage the use of efficient appliances and fixtures, and encourage the use of natural gas instead of electric appliances. Examples of measures are:
 - Use natural gas for space and water heating (if solar is not provided) and for ranges and laundry dryers. Install natural gas furnaces, water heaters, ranges, and laundry dryers (all with pilotless ignition) instead of electric appliances.
 - Select other installed electric appliances, such as dishwashers, disposals, and trash compactors on the basis of greatest energy efficiency.

- Locate windows and properly insulated skylights to provide natural light in frequently used work areas such as kitchen and sink areas.
 - Use openable windows where feasible.
 - Locate bathrooms to accommodate windows for ventilation (and light) instead of fans.
 - Use fluorescent lighting for all installed light fixtures in work areas (kitchens, bathrooms, etc.) and in common areas (corridors, laundry rooms, etc.).
 - The City should be requested to install sodium-vapor lamps for all street and parking-lot lighting. Lighting should be the minimum amount necessary for public safety. Control lighting with photoelectric cells.
 - Use accurate thermostats with readings in degrees to control water heaters.
 - Locate water heaters as close as possible to the points of hot water use and insulate hot-water pipes.
 - Use accurate clock-operated thermostats with day and night settings to control space heating.
3. Discourage use of appliances and fixtures which are wasteful of energy. Examples are:
- Electric resistance "spot" heaters in bathrooms.
 - Infrared warmer lights in food preparation or bathroom areas.
 - Infrared heaters for exterior restaurant eating areas (a combination of wind protection and passive solar heating system should be used).
 - Architectural or exterior display lighting.
 - Escalators to provide access between floors.
4. Encourage the use of public transit and the recycling of materials. Examples include:
- Coordinate with S.F. Muni to construct passenger shelters at appropriate points on the site. Provide for safety and convenience of passengers' access to shelters.
 - Provide storage areas in all structures for recyclable materials (glass, cans, newspapers) to encourage recycling.

APPENDIX E: ARCHITECTURAL EVALUATION SYSTEMS

The architectural ratings discussed in the text of this report represent the results of two separate architectural surveys.

SAN FRANCISCO DEPARTMENT OF CITY PLANNING SURVEY

Between 1974 and 1976, the San Francisco Department of City Planning conducted a citywide inventory of architecturally significant buildings. An advisory review committee of architects and architectural historians assisted in the final determination of ratings for the 10,000 buildings which were entered in an unpublished 60-volume record of the inventory. The rated buildings have been represented on a set of color-coded maps which identify the location and relative significance of each building surveyed. The maps are available for public inspection at the Department of City Planning.

The inventory assessed the architectural significance of the surveyed structures from the standpoint of overall design and particular design features. Both contemporary and older buildings were included, but historical associations were not considered. Each building was numerically rated according to its overall architectural significance. The ratings ranged from a low of "0" to a high of "5". Factors considered included architectural significance, urban design context, and overall environmental significance. The architectural survey resulted in a listing of the best 10% of San Francisco's buildings. In the estimation of the inventory participants, buildings rated "3" or better represent approximately the best 2% of the City's architecture.

HERITAGE SURVEY

More recently, the Foundation for San Francisco's Architectural Heritage, through its consultants, Charles Hall Page & Associates, Inc., conducted an architectural and historical survey of all Downtown structures. In 1979, the inventory results were published in the book Splendid Survivors. Criteria considered in rating the buildings included Architectural Significance, Historical/Cultural Significance, Environmental Significance and Negative Alterations. Summary ratings from "A" to "D" were then assigned to each building on the basis of these scores. The summary ratings indicate the following:

- A. Highest Importance. Individually, these buildings are the most important buildings in downtown San Francisco. All "A" group buildings are eligible for the National Register and are of highest priority for City Landmark status.
- B. Major Importance. This group includes buildings which are of individual importance by virtue of architectural, historical, and environmental criteria. "B" group buildings are eligible for the National Register and are of secondary priority for City Landmark status.

C. Contextual Importance. Buildings which are distinguished by their scale, materials, compositional treatment, cornice and other features are included in this group. Many "C" group buildings may be eligible for the National Register as part of historic districts.

D. Minor or No Importance. Buildings in this group are insignificant examples of architecture. Most "D" group buildings are "sites of opportunity" for development.

ARCHITECTURALLY AND/OR HISTORICALLY IMPORTANT BUILDINGS IN THE DOWNTOWN

Section 1011 of Article 10 of the City Planning Code authorizes the City Planning Commission to approve a list of structures that have historical and architectural merit, but have not been designated as landmarks. The purpose of such a list is to encourage preservation of structures of architectural and historic merit, without subjecting them to the controls imposed on designated landmarks.

In May 1978, the Planning Commission directed the Landmarks Preservation Advisory Board to prepare a list of such structures for the Commission to consider. The Landmarks Board presented a list in September of the best 300 buildings in the Downtown area, including all buildings rated A or B in the Heritage survey, Splendid Survivors, and any other buildings given high ratings in the Department of City Planning 1976 Architectural Inventory. The Planning Commission held two public hearings, in September 1979 and January 1980, and adopted the Listing of Architecturally and/or Historically Important Buildings in the Downtown on May 29, 1980 (Resolution 8600). Among the buildings in the Listing on CB-1 are the Mercantile Bldg. at 700 Mission St. and the General Services Administration (Apparel Center) Bldg. at 49 Fourth St. The Humboldt Bank Bldg. at 785 Market St., the Carroll and Tilton Bldg. at 735 Market St., the Bancroft Bldg. at 725-31 Market St. and the Central Tower at Market and Third Sts., all on Assessor's Block 3706, but outside CB-1, are also listed.



